

State of Hawaii
DEPARTMENT OF LAND AND NATURAL RESOURCES
Division of Aquatic Resources
Honolulu, Hawaii 96813

April 11, 2008

Board of Land and
Natural Resources
State of Hawaii
Honolulu, Hawaii

SUBJECT: Resubmittal - Enforcement Action against Maui Snorkel Charters, Inc.
for Damaging Coral within the Molokini Shoal Marine Life
Conservation District

SUMMARY: This submittal requests the Board to evaluate and take action on the
proposed settlement from the Responsible Party related to the finding
by the Board that the Maui Snorkel Charters, Inc. violated Chapter 190
of the Hawai'i Revised Statutes, Title 13, Chapter 31 of the Hawai'i
Administrative Rules, and its Marine Life Conservation District Use
Permit for Commercial Activities in the Molokini Shoal Marine Life
Conservation District (permit #30) by killing, injuring, and damaging
coral within the Molokini Shoal Marine Life Conservation District.

**DATES OF
INCIDENT:** September 29, 2006 through October 6, 2006

AGAINST: Maui Snorkel Charters, Inc.
1455 S. Kihei Road
Kihei, Hawai'i 96753

LOCATION: Molokini Shoal Marine Life Conservation District, Maui County,
Hawai'i

I. INTRODUCTION

The Molokini Shoal Marine Life Conservation District (“Molokini MLCD,” “Molokini,” or “the crater”), established by the Department of Land and Natural Resources (“DLNR”) in 1977, encompasses the sea area around Molokini Islet out to a depth of 30 fathoms. Molokini Islet is the uninhabited, crescent-shaped rim of an extinct volcanic crater, located approximately three miles offshore of the south Kīhei coastline on the island of Maui.

Molokini is an exceptionally popular commercial snorkel and SCUBA destination, well known for its abundant coral beds, exceptional water clarity, and tame fish populations. There are currently 41 commercial use permits issued by the Division of Aquatic Resources (“DAR”) for the Molokini MLCD. The area receives almost non-stop use during the day, with commercial vessels up to 90 feet long making both early and late morning journeys to the crater. Although exact figures are not available, it is estimated by DAR staff that the crater receives over one thousand visitors on an average day.

DLNR maintains approximately 26 submerged moorings at Molokini. These moorings are available, in theory, to both commercial and non-commercial users of this public trust resource. The reality, however, is that the moorings are almost exclusively utilized by commercial operators.

Generally, Marine Life Conservation Districts (“MLCDs”) comprise some of the state’s most valuable and unique marine resources. As a result, MLCDs are afforded vigorous protection via statutes and administrative regulations. These laws prevent practically all extractive and harmful activities within MLCDs. For example, Molokini’s regulations not only prohibit all extractive activities of aquatic life, but also prevent the taking, altering, defacing, destroying, possessing, or removing any sand, coral, rock, or any other geological feature. Hawai’i Administrative Rule (“HAR”) § 13-31-3.

From September 29, 2006 through October 6, 2006, Maui Snorkel Charters, Inc. (“MSC”) violated Chapter 190 of the Hawai’i Revised Statutes (“HRS”) (attached as Exhibit C), HAR § 13-31-3 (attached as Exhibit D), and the conditions of its own commercial use permit (attached as Exhibit B) when its vessel the *Kai Anela* sank atop the coral reef within the crater. The initial impact from the sinking damaged over 29 square meters (m²) of high density coral reef. Subsequent to the sinking, the *Kai Anela* was dragged to a second site, allegedly to prevent the vessel from breaking up against the crater. This created a second and third damage area – the drag site and the second resting site – totaling 54 m². Finally, an unsuccessful attempt to raise the *Kai Anela* resulted in the vessel impacting the bottom once again, creating a fourth damage area of 22 m². In all, over 192 m² of coral was estimated damaged by the *Kai Anela*, with 106 m² caused by direct hull impact.

This submittal sets forth three options available to the Board of Land and Natural Resources (“Board” or “BLNR”) for redressing these violations: (1) the revocation of MSC’s¹ commercial use permit for Molokini; (2) the assessment of up to \$672,618 in administrative fines, fees and costs pursuant to HRS § 187A-12.5; or (3) the imposition of a lesser fine at the Board’s discretion.

II. FACTUAL BACKGROUND²

A. *The Sinking of the Kai Anela*

On September 29, 2006, at approximately 10:55 a.m., the *Kai Anela*, a coastwise licensed 32-foot, aluminum hull, dual diesel jet drive Munson Hammerhead with a carrying capacity of 24 people, entered the Molokini MLCD in order to conduct a commercial snorkel tour. As the vessel neared its usual mooring location, Captain Steve Kahakua placed the boat in idle and instructed the 15 customers to prepare to go snorkeling. Mooring a vessel within Molokini requires a crewperson to jump in the water and locate a submerged mooring line while the captain maneuvers the vessel so that its bow (front) faces out of the crater. After the bow line is attached to the mooring, the captain reverses the boat and the crewperson secures the stern (rear). While these moorings are technically available to any commercial or private vessel, it is DAR staff’s understanding that the commercial operators have long-standing, established locations where each company moors its vessel.

Kahakua, who according to his post-incident statement had received only three days of training from MSC prior to the trip, maneuvered the *Kai Anela* into position and then signaled the crewperson, Mark Beyersdorf, to jump from the boat and locate the mooring line. Kahakua placed the boat in idle but soon noticed that the boat was being pushed by the wind and waves towards the crater. Kahakua moved the *Kai Anela* forward, approaching the water-bound Beyersdorf on the port (left) side of the vessel. According to Kahakua, he was trained that the bow line should be secured on the port side of the vessel, where it could be passed to the crewperson after the mooring line had been located in the water. The crewperson would then attach the bow line to the mooring line and the captain would pass the line over the cabin to the starboard (right) side, where it would be similarly secured.

¹ The *Kai Anela* is owned by Lu`u Kai Partners, LLC, a domestic limited liability company whose officers are Robert Chambers and Jeffrey Strahn. The booking company for the *Kai Anela* is Maui Snorkel Charters, Inc., a domestic profit corporation that shares a mailing address and corporate officers with Lu`u Kai Partners. Maui Snorkel Charters, Inc., to which the *Kai Anela*’s commercial use permit for Molokini is issued, does business as Maui Dive Shop. For sake of clarity, this action consolidates the potential penalties against Maui Snorkel Charters, Inc. because it is the holder of the commercial use permit for Molokini.

² The factual overview contained in this submittal is a summary of the investigative report prepared by DLNR’s Division of Conservation and Resource Enforcement (“DOCARE”).

Although the exact sequence of events is unclear, it appears that Kahakua, after realizing that the bow line was not where he had thought it would be, went to the front of the boat, grabbed the bow line, and tossed it to Beyersdorf. Upon returning to the helm, Kahakua once again realized that the *Kai Anela* was being pushed backwards by the wind and waves and was too close to the crater. Kahakua engaged the engines and motored toward Beyersdorf's position. Kahakua then noticed that Beyersdorf was gesturing to him with both hands, indicating that he was not in possession of the bow line. Kahakua felt something grab in the port engine and, shortly thereafter, the *Kai Anela* lost power in that engine.

Kahakua placed the starboard engine in idle as Beyersdorf re-boarded the *Kai Anela* from the stern. Kahakua instructed Beyersdorf to retrieve the bow line. Beyersdorf proceeded to the bow and returned without the line, informing Kahakua that it had apparently been sucked into the port engine drive. As the *Kai Anela* once again drifted towards the crater, Kahakua engaged the starboard engine and attempted to move the vessel a safe distance from the crater wall. According to Kahakua, operating only on starboard engine power made the vessel difficult to navigate, especially in conjunction with the strong wind, waves, and current.

As the boat drifted away from its original intended mooring location and towards the center of the crater, Kahakua instructed Beyersdorf to jump in the water to locate another mooring line. This attempt failed and Kahakua instructed Beyersdorf to re-board the vessel. As the *Kai Anela* continued to drift with limited control under single engine power, Kahakua instructed Beyersdorf to deploy the anchor. Once the vessel was secured, Kahakua turned off the starboard engine. He told the customers that their snorkeling tour would be delayed.

For approximately ten minutes, the *Kai Anela* crew attempted to contact Maui Dive Shop. During this time, Beyersdorf confirmed that the bow line was indeed stuck in the port engine jet drive. Finally, the crew was able to contact a mechanic with Maui Dive Shop named Reynato. Reynato informed them that the stuck line was an easy problem to remedy and then instructed Beyersdorf on how to remove the rope. Reynato told Beyersdorf to remove the two screws on the inspection plate. This would give him access to the impeller, around which the rope was wound. At this point, Kahakua, worried for the safety of his passengers, allegedly asked Reynato to send another vessel to tow the *Kai Anela* since the vessel was secured only by anchor and because neither he nor Beyersdorf had any mechanical experience. Reynato assured Kahakua that the removal of the rope was a simple process and that he had nothing to worry about.

Beyersdorf then jumped in the water to cut the bow line to facilitate its removal from the engine. At Kahakua's request, one of the passengers brought the rope fragment back on board the vessel. While lying on towels covering the engine to prevent being burned, Kahakua removed the two bolts securing the inspection plate. Immediately, water started flowing in the engine compartment.³ Kahakua reached his hand in and felt the rope wrapped around the drive shaft. He pulled it but it would not move. Uncomfortable with the amount of water entering the engine compartment and unable to dislodge the rope, Kahakua re-secured the inspection plate. At this point, the engine compartment was approximately one-quarter full with water.

Kahakua next returned to the helm to insure that his bilge pumps were working properly. He received verbal confirmation from some of the passengers that water was being discharged from the vessel and started the starboard engine to make sure it was still functional. Kahakua then called Reynato again, informing him of the failed attempt and requesting a tow.

Reynato allegedly instructed Kahakua, who was becoming agitated, to calm down and that he should try to remove the rope again. If he failed, then he could bring the *Kai Anela* in on starboard engine power. Even after expressing his reluctance, Kahakua nevertheless complied with Reynato's instructions, ordering Beyersdorf to initiate a second attempt at freeing the rope.

Beyersdorf removed the bolts and inspection plate and quickly ascertained that the rope could not be removed. The engine compartment was rapidly inundated with water. Beyersdorf attempted to re-secure the inspection plate but, due to the high volume of water now entering the engine compartment, was unable to do so. The engine compartment was over one-half full with water at this time.

The *Kai Anela* began to list toward its stern, taking in water over its rails in addition to the water already flowing in through the engine compartment. Beyersdorf yelled, "life preservers!" as the passengers scrambled to the front of the vessel. Kahakua, still on the telephone with Reynato, informed him that the situation was now an emergency and that the *Kai Anela* was sinking.

The stern was now completely submerged and Kahakua was underwater inside the cabin. He swam to the surface, inquired as to whether there was anyone still on the boat, and then re-submerged to double check that everyone was clear of the vessel.

Life preservers were not distributed to the passengers prior to the *Kai Anela*'s sinking. Instead, Kahakua and Beyersdorf located various items that had floated to the surface when the vessel sunk – including boogie boards and a ring buoy – and "shoved"⁴ them towards the water-treading customers.

³ Rough seas apparently caused the *Kai Anela* to rock, thereby forcing water into the engine compartment when the inspection plate was removed. Apparently, there was poor communication between the *Kai Anela* crew and Maui Dive Shop regarding the ocean conditions.

⁴ This is the word used in Kahakua's statement to the investigating DOCARE officer.

When Kahakua conducted a head count, he noticed that two customers had swum to the crater and were climbing up the rocks. Others were making their way towards the crater as well. Kahakua yelled to stay away from the rocks because of the dangerous conditions and instructed Beyersdorf to get the people off of the rocks.

While Kahakua prepared to dive down to the *Kai Anela* to deploy the emergency buoy and life raft, a vessel from Blue Water Rafting (“BWR”) entered the scene. Kahakua and the BWR captain, Ted Grupenhoff, helped the stranded passengers board the BWR vessel and then conducted a head count to make sure all were accounted for. Kahakua administered first aid to passengers who had received minor injuries during the sinking. Kahakua administered oxygen to one passenger who complained of shortness of breath. One female passenger who was pregnant apparently suffered no adverse affects from the incident.

Although unclear from the various statements associated with the investigation, it appears that by this point the Coast Guard vessel was on scene. Apparently, the *Kai Anela* passengers were split into two groups and brought back to the Kīhei Boat Harbor by the Coast Guard and the BWR boat. Kahakua and Beyersdorf gave statements to the Coast Guard investigating officer, Lieutenant Darwin Jensen, and took breath tests. EMS treated the injured passengers at the Kīhei Boat Harbor.

Finally, it is staff’s understanding that, following the initial sinking of the vessel, the *Kai Anela* did not immediately settle on the ocean floor. Instead, the boat remained partially suspended below the surface. A determination was made, presumably by MSC with outside guidance, to put a hole in the vessel hull in order to bring the *Kai Anela* down to the ocean floor.

B. The Raising of the Kai Anela⁵

The first effort to raise the *Kai Anela* was made on October 1, 2006. The salvage operation was coordinated by Dennis Smith, who was hired by MSC, and approved by the Coast Guard. Smith first ordered that the *Kai Anela* be dragged from its initial resting spot, which was close to the crater wall, in order to avoid potential break up of the vessel.

Smith, who was not on site for any of the salvage operation, developed and circulated a salvage plan, presumably based on facts obtained in communications with on site parties. The salvage plan (“Salvage Plan #1”), which is attached as Exhibit F, consisted of four stages: (1) preparing and then raising the *Kai Anela* via lift bags to 15 feet below the surface; (2) installing and then inflating additional pontoon floats until the vessel’s gunnels were above the water line; (3) pumping out water inside the *Kai Anela*; and (4) towing the *Kai Anela* to Kīhei Boat Harbor. The only contingency plan in case the vessel could not be stabilized was to tow the *Kai Anela* to Ma’alaea Harbor, presumably while the boat was still partially submerged, and then to remove the vessel with a crane. MSC was in charge of coordinating and implementing the salvage plan, despite its lack of expertise in this field.

⁵ Unlike the sinking of the *Kai Anela*, no official report exists chronicling the attempts to raise the vessel. The information contained in this section is compiled from internal Department of Health files and witness accounts of the events.

At approximately 8 a.m. on October 1, the *Kai Anela* was partially raised. According to witnesses, however, the floatation was not sufficient and, as a result of the boat being askew, the floatation devices slipped out of place and the vessel once again sunk to the bottom. Lt. Jensen closed Molokini to all commercial operations for the day.

On October 2, state officials⁶ received notice from Lt. Jensen that additional lift bags, booms, and other items were being flown in from the mainland to facilitate the second salvage attempt. Lt. Jensen mandated that the salvage plan be revised (“Salvage Plan #2,” attached as Exhibit G) to include a contingency plan calling for the hiring of a professional salvage company in the event that the second attempt was unsuccessful. Salvage operations were scheduled to resume on October 5. In the meantime, the *Kai Anela* was still resting on the coral.

At approximately 8 a.m. on October 6, almost one week after it first sank, the *Kai Anela* was successfully floated and towed to the Kīhei Boat Harbor. The vessel was subsequently repaired and is once again conducting commercial tours at Molokini. As of the date of this submittal, the Coast Guard report on the *Kai Anela* incident has not been completed.

C. *The Investigation into the Damage Caused by the Sinking, Dragging, and Failed Raising of the Kai Anela*

1. October 5, 2006 – Pre-Assessment and Impact Assessment

On October 5, 2006, DAR staff conducted three investigatory dives of the areas damaged by the *Kai Anela*.⁷ Exhibit A, pp. 14-17. First, beginning at approximately 9:15 a.m. and with excellent weather and water visibility, DAR staff conducted a pre-assessment dive, the purpose of which was to set an impact perimeter around the damaged area, define the types of habitat affected by the event, and identify and document the damage pathways. Id.

⁶ The state’s on-scene coordinator during the incident was Paul Chong from the Hazard Evaluation and Emergency Response division of the Department of Health. Chong periodically contacted Francis Oishi of DAR with updates.

⁷ The five injury sites are: (1) the initial impact site (where the *Kai Anela* settled when it first sank; (2) the debris field (adjacent to the initial impact site); (3) the dragging scar; (4) the secondary impact site (where the vessel lay after it was dragged away from the crater wall; and (5) the tertiary impact site (where the *Kai Anela* settled after the unsuccessful salvage attempt).

Next, DAR staff conducted two impact assessment dives, documenting specific damage to habitat and species, collecting evidence samples, and identifying impacts to users of the area. *Id.* Tools used to acquire this information included an underwater metric measuring tape, a black and white archaeological stick divided into ten centimeter segments, underwater data sheets, a camera, and GPS units. *Id.* In total, DAR staff chronicled over 192 m² of damage to coral, live rock, and geographical features. *Id.* at 14. Approximately 106 m² of this damage resulted from the impact of the *Kai Anela*'s hull.⁸

2. February 15 - 16, 2007 – Ecological Assessment and Damage Quantification

On February 15 - 16, 2007, DAR staff conducted multiple ecological assessment dives to determine the scope of damage to coral species⁹ caused by the *Kai Anela*. Because the damage was so severe, staff was unable to accurately determine the pre-existing coral coverage within the impacted areas and, therefore, could not extrapolate estimates of the damage caused by the incident.

Instead, staff took coral cover measurements from parallel and adjacent control areas in order to arrive at estimates of pre-incident coral coverage within the damaged areas, which, in turn, allowed for an estimate of the damage within the impacted area. Exhibit A, pp. 18-19. This involved multiple steps. First, DAR staff established two ten meter transect lines on either side of each impact area. *Id.* at 19. This resulted in four replicate transects adjacent to and with the same depth profile as each injured area (total of twelve control transects). *Id.* Second, staff counted, measured, and classified all coral colonies directly under and out to .5 meter on either side of the transect lines. *Id.* This resulted in a measurement of coral colony coverage within ten square meters for each of the four parallel transects. *Id.* Third, staff arrived at an estimated number of coral colonies damaged by multiplying the damage area by the average number of coral colonies per square meter in the control transects, and then dividing by ten square meters. *Id.* Fourth, staff determined confidence intervals of 90% using the standard deviation and the number of controls for each derived number of colonies damaged per species.¹⁰ *Id.*

Using this quantification, the range of coral colonies damaged in the *Kai Anela* incident was estimated to be between 1,230 and 1,494, with a mean of 1,362. *Id.* at 22. Limiting this total to an estimate of colonies damaged specifically by the hull (eliminating the debris field from consideration), the adjusted range was between 661 and 871, with a mean of 766. *Id.* Published growth rates for *Porties lobata*, the largest colonies measured (80 – 160 cm), average around 1 centimeter per year. This means that full recovery of the damaged area may take at least 80 years. *Id.* at 24.

⁸ This figure was arrived at by subtracting the Debris Field area (85.75 m²), the origin of which is not known, from the overall damage area of 192.06 m².

⁹ It is important to note that this submittal only addresses damage specifically to coral. This damage is quantifiable and therefore readily transferable to an administrative fine based on, as specified by the relevant statute, a “per specimen” analysis. Additional damage to other geological features of the ocean floor at Molokini, while similarly prohibited by HAR § 13-31-3, is not quantifiable by this method and is therefore excluded from the analysis.

¹⁰ Using 90% confidence intervals results in a range, with lower and higher estimates of coral damaged.

III. LEGAL AUTHORITY

A. *The Marine Life Conservation Program and the Molokini MLCD*

Chapter 190 of the HRS establishes the marine life conservation program of which Molokini is a part. HRS § 190-1 states that: “[n]o person shall fish for or take any fish, crustacean, mollusk, live coral, algae or other marine life, or take or alter any rock, coral, sand or other geological feature” within any MLCD. HRS § 190-3 directs DLNR to “adopt rules governing the taking or conservation of fish, crustacean, mollusk, live coral, algae, or other marine life as it determines will further the state policy of conserving, supplementing and increasing the State's marine resources.”

HRS § 190-4 provides that DLNR may issue permits for scientific, education, or other public purposes within an MLCD, provided that the permit minimizes adverse affects within the conservation district. Furthermore, DLNR may revoke a permit for any infraction of the terms and conditions of the permit. A person whose permit was revoked may not apply for a new one until the expiration of one year from the date of revocation. HRS § 190-4.

Operating under the authority provided it by Chapter 190, BLNR promulgated rules establishing Molokini as an MLCD. These rules are set forth in Title 13, Chapter 31 of the HAR and provide the utmost level of protection for the living organisms and geographical features of the crater.

HAR § 13-31-3 prohibits the following activities within Molokini:

- fishing for, catching, taking, injuring, killing, possessing, or removing any finfish, crustacean, mollusk, live coral, algae or limu, or other marine life or eggs;
- having or possessing in the water any spear, trap, net, crowbar, or other device used for the taking or altering of marine life, geographical feature, or specimen;
- taking, altering, defacing, destroying, possessing, or removing any sand, coral, rock, or other geographical feature or specimen;
- feeding or introducing food material, substance, or attractant directly to or in the vicinity of any aquatic organism;
- mooring boats for commercial activities except as provided in section 13-31-5; or
- anchoring a boat within the MLCD.

For the purposes of this enforcement action, it is important to take special note of the underlined terms, which, when read together, provide that it is unlawful to kill or injure live coral or to alter, deface, or destroy any coral, live or dead. Thus, coral enjoys absolute protection within the Molokini MLCD.

B. MSC's Permit for Commercial Activities within the Molokini MLCD

Pursuant to the terms of HRS Chapter 190, DLNR currently has issued 41 Marine Life Conservation District Use Permits for Commercial Activities in the Molokini Shoal MLCD. MSC applied for and was granted a permit for the *Kai Anela*. This permit is valid from December 16, 2005 until December 15, 2007.

MSC's permit allows the *Kai Anela* to conduct commercial activities (specifically, snorkeling) within Molokini pursuant to a list of ten terms and conditions. Condition #1 states that the "permittee shall comply with all applicable provisions of the Department of Land and Natural Resources HAR, Chapter 13-31, and other applicable laws not exempted by this permit." Exhibit B. Condition #4 states that the "permittee shall be responsible and accountable for all actions under this permit." *Id.* Finally, Condition #9 provides that the Board "may revoke any permit for any infraction of the terms and conditions of this permit, and a person whose permit is revoked shall not be eligible to renew a permit until the expiration of one year from the date of revocation." *Id.* (Emphasis added). Jeffrey Strahn signed the permit as MSC's representative.

C. Penalties Available for Violations of Title 13, Chapter 31, HAR

HAR § 13-31-6 provides that violators of any of the provisions of Title 13, Chapter 31 or the terms and conditions of a permit shall be punished as provided by law. There are three methods of punishment available: (1) criminal penalties; (2) commercial use permit revocation; or (3) assessment of administrative fines, fees, and costs. Each of these options will be addressed in turn.

First, criminal penalties may be imposed via HRS § 190-5. Parties guilty of violating HRS Chapter 190 or its associated administrative rules "shall be guilty of a petty misdemeanor" and fined \$250 for a first offense, \$500 for a second offense, and \$1000 for a third or subsequent offense. HRS § 190-5.

Second, pursuant to HRS § 190-4 and HAR § 13-31-5 the Board may revoke any permit for any infraction of the terms and conditions of an MLCD permit or a direct violation of HAR Chapter 13-31. Following this revocation, the permit holder may not be eligible to receive another permit for a minimum of one year. HRS § 190-4, HAR § 13-31-5.

Third, HRS § 187A-12.5(c) allows the Board to assess administrative fines and costs for violations of MLCD statutes and rules as follows: "(1) [f]or a first violation, a fine of not more than \$1,000; (2) [f]or a second violation within five years of a previous violation, a fine of not more than \$2,000; and (3) [f]or a third or subsequent violation within five years of the last violation, a fine of not more than \$3,000." Furthermore, HRS § 187A-12.5(e) provides that, in addition to the fine schedule outlined above, "a fine of up to \$1,000 may be levied for each specimen of . . . aquatic life taken, killed, or injured" in violation of aquatic statutes or rules. (Emphasis added.) "Aquatic life," according to HRS § 187A-1, includes coral. Finally, HRS § 187A-12.5(a) authorizes the Board "to recover administrative fees and costs . . . or payment for damages or for the cost to correct damages resulting from" a violation of the MLCD statutes and rules.

IV. ANALYSIS

Of the three penalty options outlined above, this submittal considers permit revocation and the assessment of administrative fines only. Following a thorough investigation, DOCARE determined that criminal charges were not warranted.

Before presenting the options available to the Board, it is first necessary to review several facts underlying the incident that may prove helpful to the Board's determination. First, MSC management and employees made a series of poor, and potentially negligent, decisions that led to two distinct sinkings of the *Kai Anela*. For instance, Captain Kahakua received only three days of training and was on his first solo mission to Molokini on the day of the incident. Furthermore, after Kahakua called Maui Dive Shop on multiple occasions expressing his distress and requesting a tow or on-site assistance, Reynato, the staff member with whom he spoke, refused to send help. Instead, Reynato insisted that the matter could be handled via telephone, even going so far as to tell Beyersdorf the crew member not to listen to Kahakua, who he claimed was overreacting. Kahakua and Beyersdorf also exhibited poor judgment when, despite the fact that their first attempt to remove the rope was unsuccessful and filled the engine compartment a quarter full with water, they acquiesced to Reynato's urgings and proceeded with a second attempt. Finally, although this information is unconfirmed, MSC apparently contributed to the final stage of the sinking of the *Kai Anela* by boring a hole in the vessel and depositing it on the high density coral floor of Molokini. It is unclear if any consideration was given to possible alternatives, including towing the vessel to a location of lesser coral density.

Second, decisions made during the incident cast doubt on MSC's ability to responsibly and safely conduct their commercial operations at Molokini. While the *Kai Anela* was equipped with federally required emergency floatation devices, they were never distributed to the passengers, despite ample evidence that the vessel was in distress. It also appears from the investigative report that the floatation devices were not readily accessible. As a result, fifteen customers, including a pregnant woman, were deposited into the ocean on a rough, windy day at Molokini, with only boogie boards and other recreational floatation items to support them. MSC's leadership was extremely fortunate that no one died or was seriously injured during the incident.

Third, after the initial, preventable sinking of the *Kai Anela*, MSC's subsequent actions exacerbated the damage to Molokini's coral reef. On the advice of the salvage master, who was not even present on scene, MSC elected to drag the *Kai Anela* away from the crater wall, which arguably may have prevented environmental damage caused by the break up of the vessel and resulting dispersal of fuel, oil, and other contaminants. It resulted, however, in an additional damage scar of 54.2 m² (11.09 m² for the dragging scar plus 43.09 m² for the secondary impact site). Furthermore, MSC's first attempt to raise the *Kai Anela* was made under the following conditions: (1) with an absentee salvage master; (2) with insufficient buoyancy devices; (3) with MSC employees, presumably not professionally trained in marine salvage, as the primary staff; and (4) with an insufficient contingency plan. For the second attempt, MSC was mandated by the Coast Guard to include the hiring of a professional salvor as part of its contingency plan. See Exhibit G. The unsuccessful salvage essentially resulted in a second sinking of the *Kai Anela* and another 22 m² of damage to the reef. Finally, the incident resulted in lost revenue for other commercial tour operators who were unable to access Molokini while the salvage operation was ongoing.

In sum, MSC management and staff members' pre-incident actions precipitated the event, their reaction to the event accelerated its occurrence, and their response to the initial sinking more than tripled the initial amount of damage to Molokini's fully protected and extremely valuable coral reef.

While the ultimate decision on an appropriate financial penalty lies with the Board, staff believes that a significant penalty is appropriate based on: (1) the magnitude of damage inflicted upon Molokini's coral reef, which is a public trust resource; (2) the environmental and economic importance of Molokini as one of the state's few MLCDs; (3) the careless, potentially negligent actions and decisions of MSC's management and employees before, during, and after the initial sinking; (4) the risk of catastrophic personal injury that resulted from these actions and decisions; and (5) the importance of establishing a precedent that such incidents, especially within an MLCD and especially when preventable, will garner an appropriate response from the Board.

The options available to the Board are as follows:

A. Revocation of MSC's Commercial Use Permit

The Board has the authority to revoke MSC's commercial use permit based on HRS § 190-4, HAR § 13-31-5, and Condition #9 of the permit itself. Revocation may occur for any infraction of a permit term or condition or for a violation of HAR Chapter 13-31.

The protection of coral within Molokini is absolute. Injuring, killing, altering, defacing, or destroying any coral is strictly prohibited. In essence, the statutes and rules governing Molokini establish a strict liability regime for coral damage, meaning there is no accommodation for intent or fault.

It is unquestioned that the *Kai Anela* damaged coral within Molokini. It is also unquestioned that this damage violated statutory and regulatory authorities strictly prohibiting such damage, as well as the plain language of MSC's commercial use permit. As a result, it is well within the Board's authority to revoke MSC's commercial use permit.¹¹

Revocation would enact a severe financial penalty on MSC. While exact figures as to the value of the permit are not available, staff believes that the following computations provide a reasonable estimate of the value of the commercial use permit.

¹¹ It is also important to note that MSC's commercial use permit states that, "[t]he board may revoke any permit for any infraction of the terms and conditions of this permit. . . ." See Exhibit B. (Emphasis added.) MSC holds a total of four commercial use permits for Molokini. Based on this language, it appears that all four permits are susceptible to revocation based on the violation of a single permit.

The *Kai Anela* makes two trips per day to Molokini, carrying a maximum of 24 passengers per trip. See Exhibit E, printed from the Maui Dive Shop website on August 16, 2007 (<http://www.maudiveshop.com/snorkeltrips/Snorkeltrips.html>). The adult price for the trip is \$49.95 per person and the child price (age 4-12) is \$44.95. *Id.* According to staff at Maui Dive Shop, the boat usually runs at full capacity.

Thus, using the average of the adult and child prices (\$47.45) for two trips per day on a boat with 22 passengers (2 less than maximum) and assuming the vessel runs 90% of the days of the year (allowing for cancellations due to weather issues, mechanical problems, and holidays), the yearly net value of MSC's commercial use permit is estimated to be \$686,886.20.¹² MSC's permit, as previously established, is valid for two years, which means the total estimated value of the permit is close to \$1.4 million.

Pursuant to HAR § 13-31-5, the Board's revocation of MSC's permit would preclude the company from re-applying for a permit for a one year period. This means that the revocation of MSC's permit would enact the equivalent of an estimated \$686,886.20 penalty against MSC.

B. Assessment of Administrative Fines, Fees and Costs for Damage to Coral

The Board may assess administrative fines and fees and costs against MSC of up to \$672,618 for damaging an estimated range of 661 to 871 specimens of coral during the *Kai Anela* incident. As stated before, HAR § 13-31-3 establishes strict liability for damage to coral, live rock, or geographical features within the Molokini MLCD.

The *Kai Anela* incident, which lasted a total of seven days and involved four impact sites, resulted in dead and damaged coral from the *Kai Anela* hull within 106 m² of impact area. Subsequent DAR investigation revealed that, based on a 90% confidence interval, between 661 and 871 coral colonies were killed, injured, or damaged.

¹² (\$47.45 – average price) x (22 passengers/trip) x (2 trips/day) x (329 days per year – 90% of 365) = \$686,886.20. It is important to note that this value is probably low. The estimates of average price, number of passengers per trip, and percentage of days operating per year are all purposely conservative. There is a high likelihood that the vessel runs more days per year, at fuller capacity, and with a higher average rate (due to the fact that there are probably more adults per trip than children). If this is the case, then the yearly value of MSC's permit is probably well over \$700,000.

HRS § 187A-12.5(c)(1) allows the Board to assess an administrative fine of up to \$1,000 for a first time violation of DAR regulations, including those for the Molokini MLCD. Furthermore, HRS § 187A-12.5(e) allows the Board to assess fines of up to \$1,000 per “specimen” of aquatic life taken, killed, or injured as part of this violation. A coral colony is a “specimen” for purposes of an administrative fine under HRS § 187A-12.5. See Exhibit J. Finally, HRS § 187A-12.5(a) allows the Board to charge the violator for fees and costs incurred by DLNR as a result of the violation.

Using this framework and the lowest estimate of coral specimens damaged, the Board may assess the following penalty against MSC:

Available Penalties	Proposed Penalty	Offense	Legal Authority
Graduated fines (up to \$1,000 for 1 st offense)	\$1,000	Unlawfully killing and injuring coral within the Molokini MLCD	HAR § 13-31-3 & HRS §§ 187A-12.5(c), 190-1
Graduated fines (up to \$1,000 per specimen for 1 st offense)	\$661,000	\$1,000 per specimen of coral damaged x 661 specimen	HRS § 187A-12.5(e)
Fees & costs incurred by DLNR ¹³	\$10,618	Costs to assess coral damage, DOCARE investigative costs, staff time	HRS § 187A-12.5(a)
TOTAL	\$672,618		

C. Assessment of a Lesser Fine at the Board's Discretion

Because HRS § 187A-12.5 allows the Board to assess penalties “up to” the threshold amounts, the Board may consider assessing a lesser, but still significant, fine up to the amount of the proposed fine outlined in subsection B. One possible method of calculating such a penalty is to utilize coral reef valuation data from the “Economic Valuation of the Coral Reefs of Hawai‘i” report prepared by Herman Cesar et al. See Exhibit I.

In this study, the only of its kind to study the economic value of Hawai‘i’s reefs, Cesar and his team used a variety of components¹⁴ to determine the square meter valuation for three of Hawai‘i’s coral reefs: the Kihei coast, Maui, the Kona coast, Hawai‘i, and Hanauma Bay, O‘ahu. Their respective net present values were as follows:

¹³ See Exhibit H for a break down of DLNR’s costs associated with this incident.

¹⁴ Components included: recreational value, amenity value, biodiversity value, fishery value, and education spill-over value.

- Kihei coast - \$65/ m²
- Kona coast- \$19/m²
- Hanauma Bay - \$2,568/ m²

Molokini was not part of the study. Considering its biodiversity, its pristine state, and heavy recreational use (with associated economic contributions to the state general fund), it is possible, however, to analogize the value of Molokini's reef with Hanauma Bay's. Utilizing this number in conjunction with the damage data, a fine could be imposed within the following parameters:

$$106 \text{ m}^2 \text{ of area damaged by hull} \quad \times \quad \$2,568/\text{m}^2 \quad = \quad \text{\$272,208}$$

V. OHA COMMENTS

Pursuant to Chairperson Laura H. Thielen's memorandum of September 11, 2007, a copy of this submittal was sent to OHA requesting comments on October 12, 2007. OHA's response letter is attached as Exhibit K.

VI. PREVIOUS BOARD ACTION

On January 25, 2008, the Board requested that DLNR attempt to negotiate a settlement with MSC to include a commercial use permit suspension of an undetermined time and a payment plan of not less than \$550,000 and for the Chair to report back to the Board with the outcome of those settlement negotiations. In addition, \$10,000 for administrative costs on top of the payment was to be included in the settlement negotiations.

VII. PROPOSED SETTLEMENT OFFER

A proposed final settlement has been put forward by the Responsible Party (Exhibit L) which was contained in a letter to the Attorney General's office on March 7, 2008. The Responsible Party, through the Attorney General's Office, gave permission for the inclusion of this offer within this resubmittal. The letter suggests settlement terms different than those directed by the Board on January 25, 2008.

VIII. RECOMMENDATION

The Board directed DLNR to negotiate with the Responsible Party within certain parameters. DLNR was unsuccessful so the Board now needs to take action. It is recommended that the Board evaluate the proposed settlement terms put forward by the Responsible Party. Should the Board find this settlement unacceptable, we recommend the following:

Considering the three options available to the Board, Staff recommends that the Board revoke MSC's commercial use permit for Molokini for one year pursuant to HRS § 190-4, HAR § 13-31-5, and condition #9 of the permit itself. Staff believes that permit revocation is the appropriate sanction based on the severity of the damage to Molokini's coral reef and the circumstances associated with the event.

In addition, the Board in its discretion may elect to impose a fine of up to the maximum amount allowed by statute (\$672,618), in addition to permit revocation.

Respectfully Submitted,



DAN POLHEMUS, Administrator
Division of Aquatic Resources

APPROVED FOR SUBMITTAL:



LAURA H. THIELEN
Chairperson

'Kai Anela' Injury Event Molokini MLCD, October 2006

Field Investigative Report

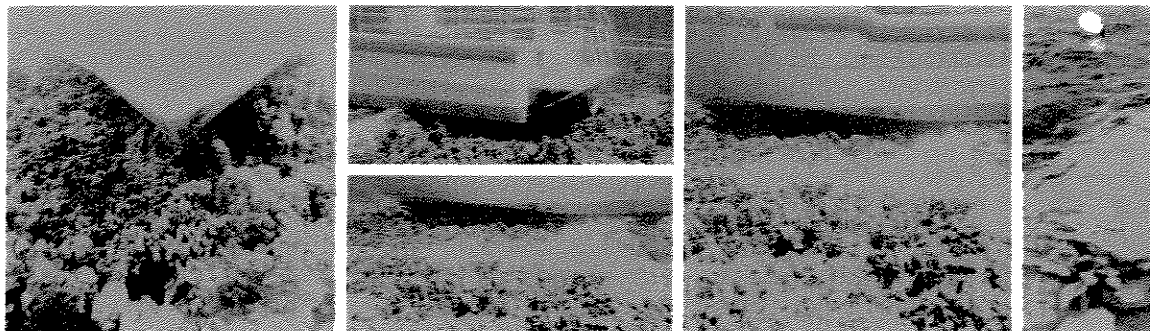
Dave Gulko

Division of Aquatic Resources • October 3, 2007



'Kai Anela' Investigative Report

RESULTS OF FIELD INVESTIGATION



Various views of the 'Kai Anela' atop live coral at Molokini MLCD

EXECUTIVE SUMMARY

On September 29, 2006, Maui Dive Shop's 'Kai Anela' sank on a shallow water area at Molokini MLCD with very high coral cover. Over the next couple days the owner made unsuccessful attempts to salvage the vessel resulting in far more extensive damage to the coral reef than the original event. DAR biologists measured the five large injured areas (totaling over 192 m²), and adjacent unimpacted reef on both sides of each injured area in order to determine the number of coral colonies damaged by each of these injury events. Over 1362 colonies¹ of live coral are estimated to have been damaged by the series of damaging actions taken by the Responsible Party (RP), with 766 colonies¹ of live coral thought to have been damaged directly by the hull of the vessel. These colonies provided important habitat for many of the species of fish, invertebrates and sea turtles that make their home within the Molokini MLCD and that are used daily by the public visiting this internationally-recognized marine protected area. Based on the largest colonies observed within the adjacent control transects, we conservatively estimate that it may take upwards of eighty years for the reef to fully and naturally recover from this series of damaging actions by the RP. To be clear, that's a minimum of eighty years of lost ecological services to both the public and the environment within this extremely valuable and extremely important marine protected area.

¹ Using the 90% Confidence Interval equals 1362 +/- 132 colonies, and 766 +/- 105 colonies respectively.

OVERVIEW

On September 29, 2006, at about 12:17 p.m., the master of the charter marine snorkel tour vessel 'Kai Anela' (Figure 1) made a Mayday call reporting his boat was sinking and that he needed immediate assistance. The motor vessel 'Pineapple Express' was already in the area, so the master diverted from his course to assist the 'Kai Anela'. The 'Pineapple Express' arrived on scene before the U.S. Coast Guard, and safely transferred all 15 people from the sinking boat onto the passenger vessel. A Coast Guard rescue boat and crew arrived on scene shortly after. No injuries were reported at the time regarding any passengers or crew. The Coast Guard small boat crew on-scene confirmed that the 'Kai Anela' completely sank and there was no fuel sheen. The Coast Guard established a 100-yard safety zone around the last known position of the vessel. A notice to mariners was broadcast on VHF-FM Channel 16 to alert mariners to the potential hazard to navigation.

After the vessel sunk, several salvage activities were conducted that caused additional, and considerable, natural resource damage prior to DAR conducting an in-water investigation on October 5, 2006. DAR coordinated all investigation activities with the Federal On-Scene Coordinator (FOSC), USCG; the State On-Scene Coordinator, DOH HEER office; and DLNR's enforcement branch, DOCARE. At the time of DAR's field investigation, there were multiple injury sites along with a site where the vessel was at that time sitting atop the coral reef (Figures 2 & 3).

On October 6, 2006 the Coast Guard monitored the recovery of the marine tour vessel 'Kai Anela' from waters within Molokini MLCD. The Coast Guard investigation into the cause of the sinking was still on-going at that time. The vessel was recovered with no significant pollution reported by the Coast Guard. The vessel was then towed to Keihi Boat Ramp for repair. The safety zone previously established around the vessel was lifted by the Coast Guard after the recovery.

VESSEL AND SITE BACKGROUND

The 'Kai Anela' is a 32' foot long, twin-engine jet-driven, aluminum-hulled vessel. It can carry up to 24 snorkelers plus crew and has a marine head aboard. The owner, Maui Dive Shop, uses the vessel at Molokini MLCD under a permit from the Department.



Fig. 1. 'Kai Anela' Vessel in Use.

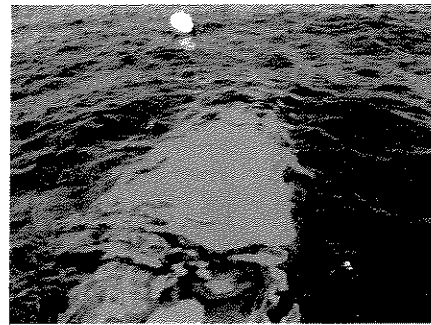


Fig. 2. 'Sunken Kai Anela' Vessel Visible From the Surface.



Fig. 3. USCG vessel on-site maintaining safety zone around sunken vessel (location shown with yellow circle).

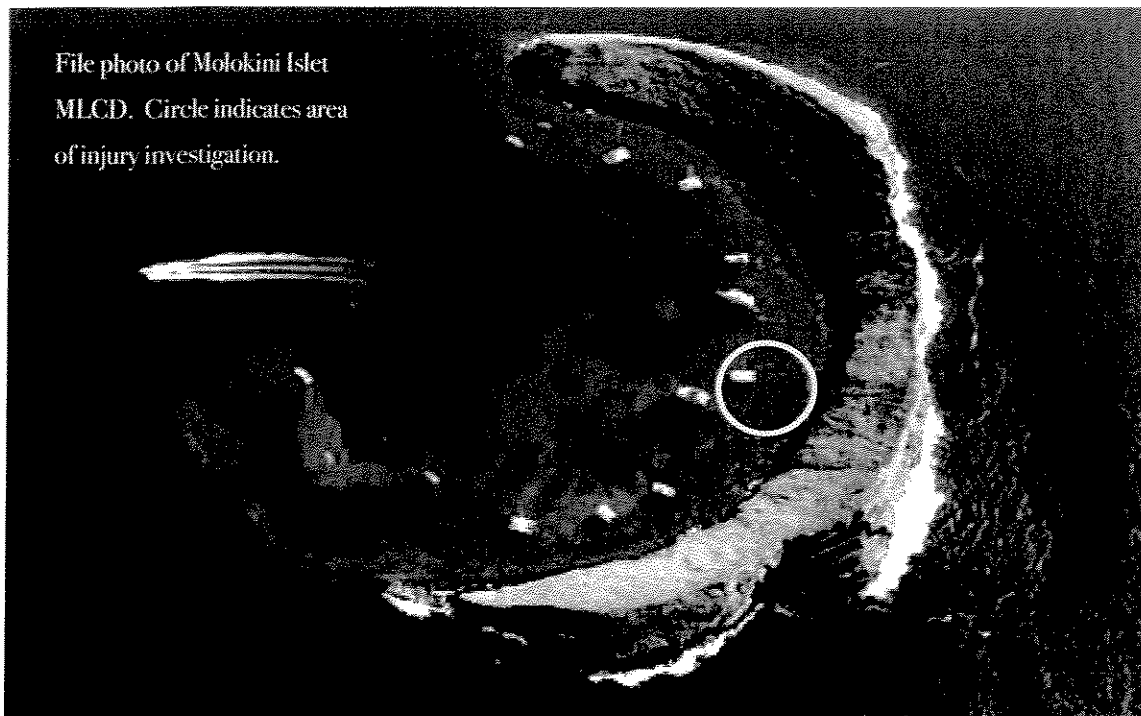


Fig. 4. Molokini MLCD. Yellow circle represents approximate location of the five documented impact areas.

The waters surrounding Molokini Islet are a no-take Marine Life Conservation District (Figure 4). Molokini Islet is located approximately 3 miles off the southwestern coast of Maui. MLCD regulations expressly prohibit injuring of any marine life, and the altering of any geological feature. Rules also require a permit for commercial activities and prohibit the anchoring of boats. The MLCD is divided into two subzones, "A" and "B". Subzone "A" includes the waters within the remnant crater, while subzone "B" surrounds the periphery of the islet.

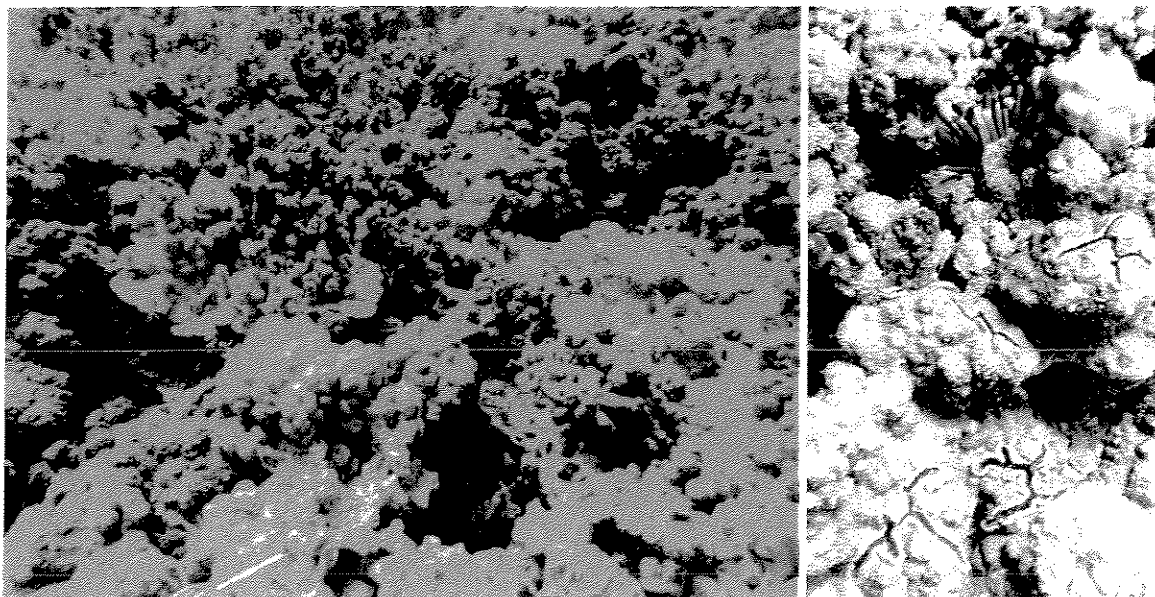


Fig. 5. Area immediately adjacent to injury showing extremely high live coral coverage.

The specific area where the vessel repetitively sank contained within it a long-term coral reef monitoring site maintained by the Division of Aquatic Resources; in fact, the vessel damage occurred in part on top of this long-term transect, negatively impacting it. From the long-term data series from this site we know that the immediate area impacted by this event represented

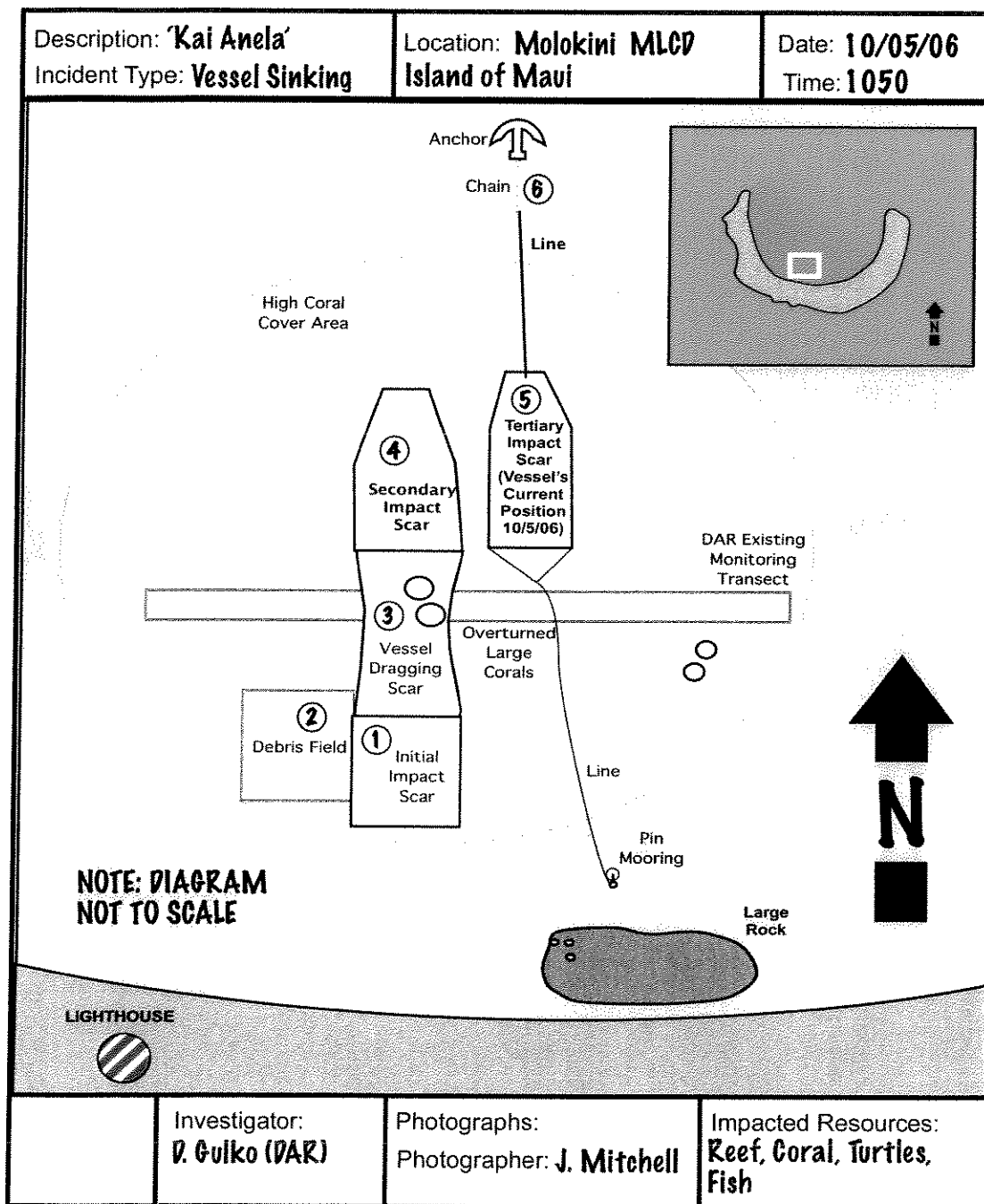


Fig. 6. Diagram of Injured Areas (Numbered 1 through 5), Representing Various Impact Events.

some of the highest live coral cover found at Molokini MLCD (within this depth range) prior to this event (Figure 5). The area was characterized as having well-established colonies of mostly *Porites lobata*, *Montipora capitata*, and *M. patula* forming areas of between 50 - 90% live coral cover.

INJURY SCENE DESCRIPTION

DAR conducted both a pre-assessment and impact assessment on October 5, 2006 from the Maui DAR boat. Maui Biologist Skippy Hau, Maui I & E Specialist Russell Sparks, Maui Technician John Mitchell and myself conducted the surveys. The Maui DAR boat arrived at the Molokini MLCD around 0915. Site weather was sunny with light winds; water clarity was exceptional, the bottom habitat down to 40' was clearly visible, as was the submerged 'Kai Anela' and the various impact scars caused by the injury event. The submerged vessel injury areas were generally located at W 20° 37.893, N 156° 29.791. A USCG vessel was on scene maintaining a no-entry safety zone around the submerged vessel. USCG vessel departed once we started our in-water investigation.

The following damage sites (Figure 6) were recorded (by measurement, photo and GPS (along with written site descriptions):

- 1 Initial Impact Site:** Located at W 20° 63129, N 156° 49654. Characterized by an impact area consisting of crushed and broken coral in approximately 18 – 20' depth (Figures 7, 8 & 9). Collected samples of freshly broken coral (as evidenced by the bright white internal exposed skeleton, live coral tissue and lack of wear or overgrowth by algae on the broken coral pieces) with metal scrapings on it. Coral and live rock damage was measured based upon the direct injury scar area of 8.82 m length by 3.30 m width and totaled **29.11 m²**.

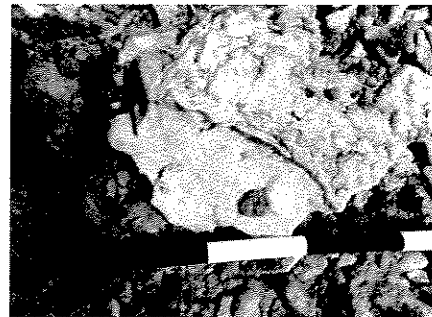


Fig. 7. Broken Coral Substrate.

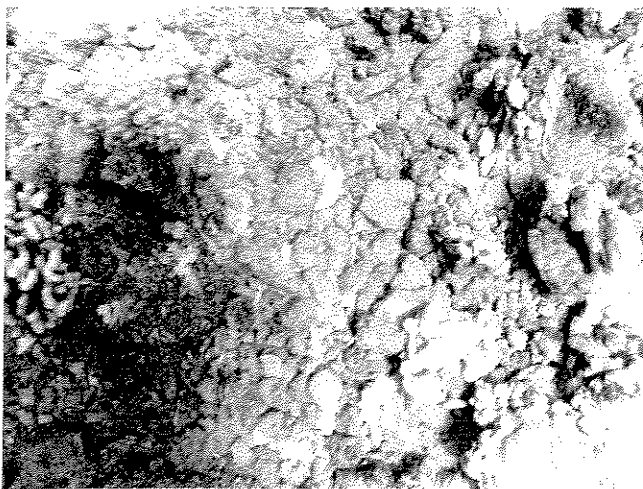
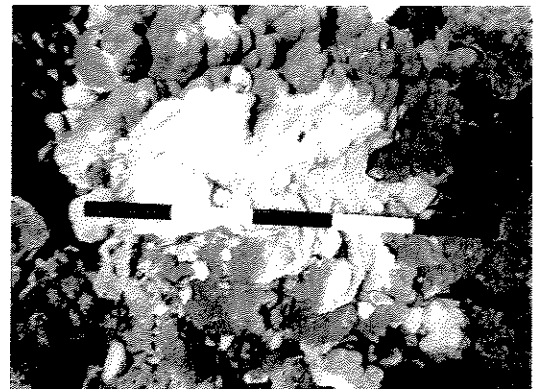


Fig. 9. Large live colonies of coral (>40 cm) were split open (right).

Fig. 8. Large pieces of coral reef substrate were broken into rubble by the initial sinking event (left). Crushed and broken coral was found throughout the measured injury area as shown with flash photography.



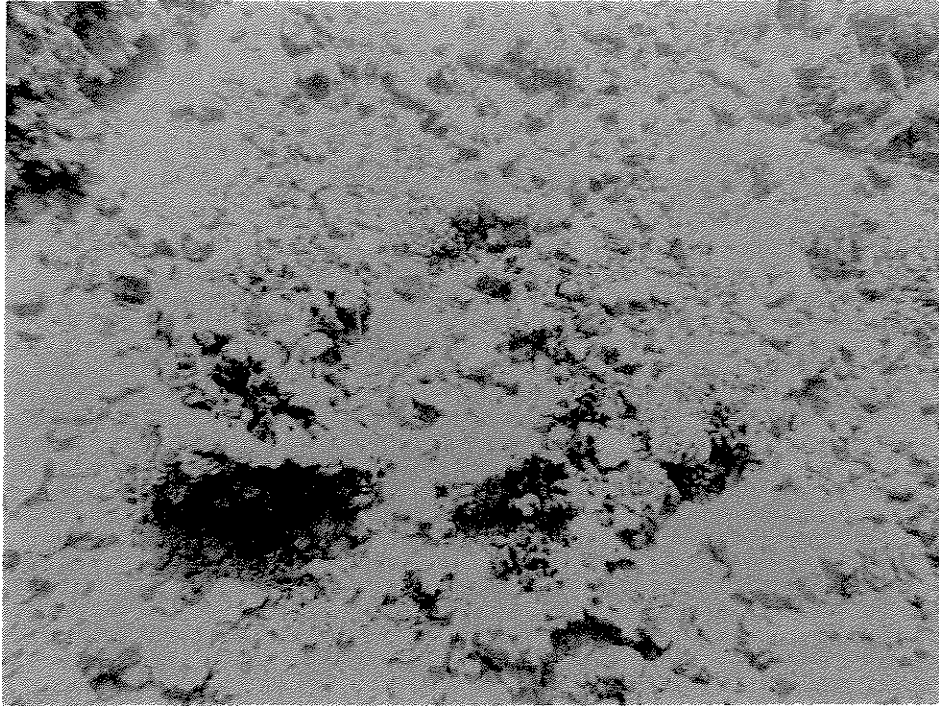


Fig. 10. Rubble, Broken and Over-turned Coral Within Initial Impact Area..

- 2 A **debris field** was measured directly west of the initial impact site and consisted of some minor coral damage and loose paper product fragments in a roughly rectangular-shaped area. Coral and live rock damage was measured based upon the direct injury scar area of 12.25 m length by 7 m width and totaled **85.75 m²**. The damaged area could be characterized as consisting of coral rubble pieces (Figure 11) and loose papers fragments, gauze pads and some loose plastic pieces..



Fig. 11. Rubble and recently broken corals piled within the Debris Field.

3

Vessel Dragging Scar Site: Located at W 20° 63141, N 156° 49656. Extending from the initial impact site to the secondary impact site. Large amount of broken coral and some overturned coral heads in approximately 20' depth. Collected samples of both paint scrapings and metal scrapings on freshly broken coral (as evidenced by the bright white internal exposed skeleton, live coral tissue and lack of wear or overgrowth by algae on the broken coral pieces). Coral and live rock damage was measured based upon the direct injury scar area of 7 m length by 1.7 m width and totaled **11.9 m²**. The damaged area could be characterized as consisting of shattered, dislodged heads of coral (Figures 12 & 13).

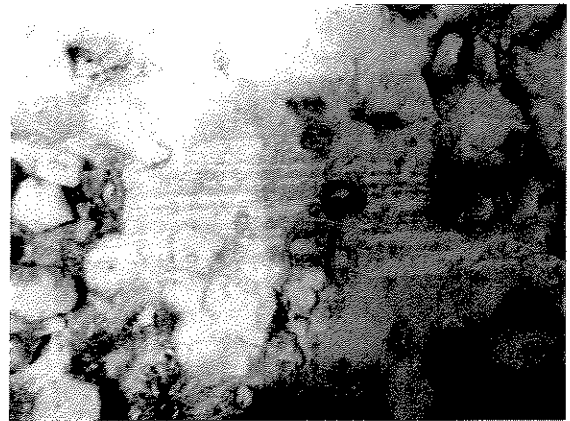


Fig. 12. Scrapes in broken coral colonies show direction of the vessel being dragged through the living reef substrate.



Fig. 13. Breakage occurred in large (>50 cm diameter) colonies of coral that may represent colonies over 50 years old.

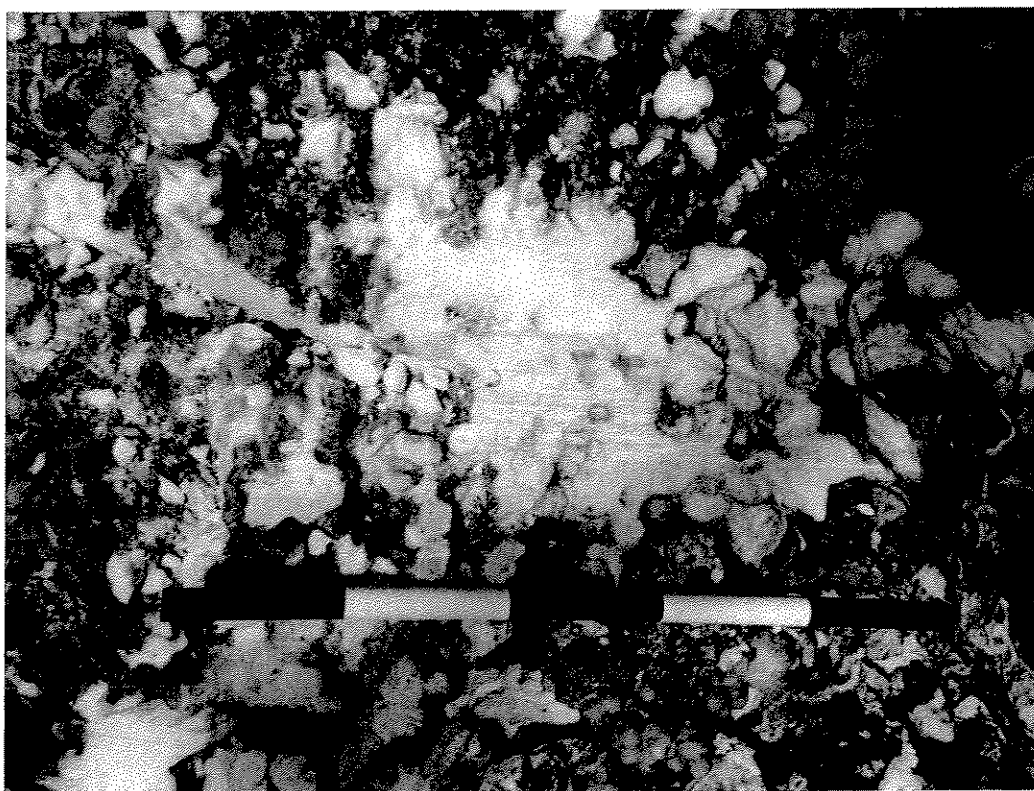


Fig. 14. Fractured coral colony showing hull scrape caused as vessel was dragged through the reef to move it.

4

Secondary Impact Site: Located at W 20° 63145, N 156° 49651. Similar in shape and size to the first impact site (roughly the length of the bottom portion of the submerged vessel sitting directly to the east of it (Figure 15). High amount of smashed and broken live coral; some pulverization in approximately 25' depth (Figures 16 through 19). Collected samples freshly broken coral (as evidenced by the bright white internal exposed skeleton, live coral tissue and lack of wear or overgrowth by algae on the broken coral pieces) with metal scrapings on it. Coral and live rock damage was measured based upon the direct injury scar area of 10.02 m length by 4.3 m width and totaled **43.09 m²**. The damaged area could be characterized as consisting of broken and severely crushed coral.



Fig. 15. The Secondary Impact Site was located to the west of the vessel's submerged location. It represented the location where the vessel was dragged to. The lack of marks between the Secondary and Tertiary Impact Sites suggests that the vessel was raised and then re-sunk in its position shown.

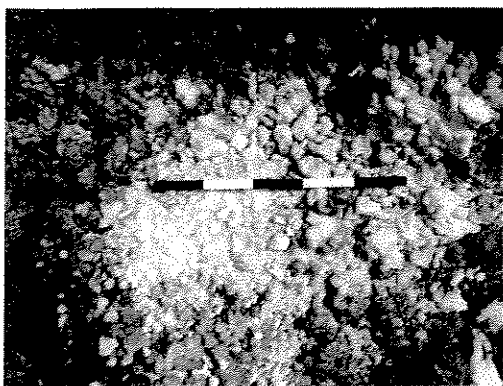


Fig. 16. Shattered coral colonies (scale bar is 50 cm long in 10 cm segments).

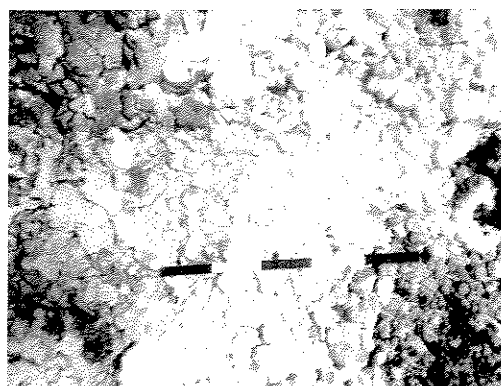


Fig. 17. Large area of pulverized coral colonies.

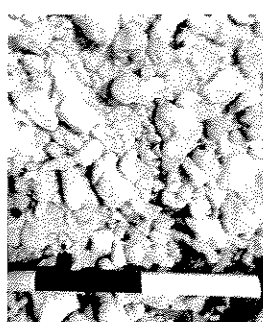
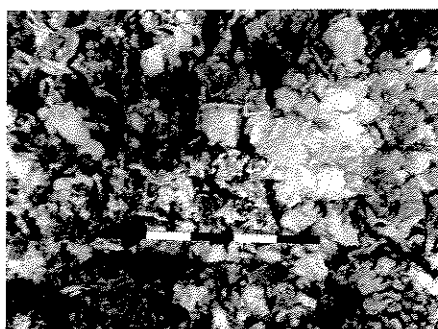


Fig. 18. Shattered coral colonies, including close-up of internal skeleton rubble.

5

Tertiary Impact Site: Located at W 20° 63146, N 156° 49649. Where the vessel was currently sitting directly east of the secondary impact site in approximately 25' depth. Very little lateral movement of the vessel had occurred at this site when we collected measurements on the afternoon of 10/5/06. Collected samples freshly broken coral (as evidenced by the bright white internal exposed skeleton (Figure 20), live coral tissue and lack of wear or overgrowth by algae on the broken coral pieces) with metal scrapings on it. Coral and live rock damage was measured based upon the direct area underneath the submerged hull (Figures 21 through 24) of 7.9 m length by 2.8 m width and totaled **22.12 m²**. The damaged area could be characterized as consisting of broken coral, with the keel and stern of the vessel cutting into live coral heads.



Fig. 20. Close-up of shattered, large *Porites lobata* colony.



Fig. 21. Submerged vessel lying directly atop living coral (*above and right*). Broken coral next to keel (*below*).

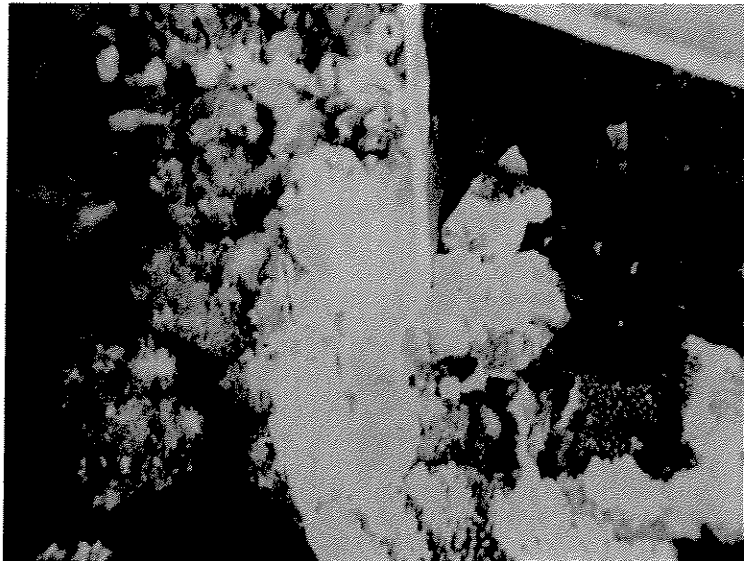
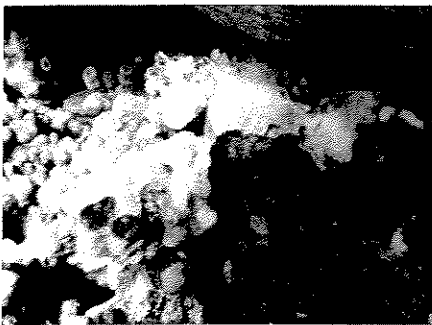
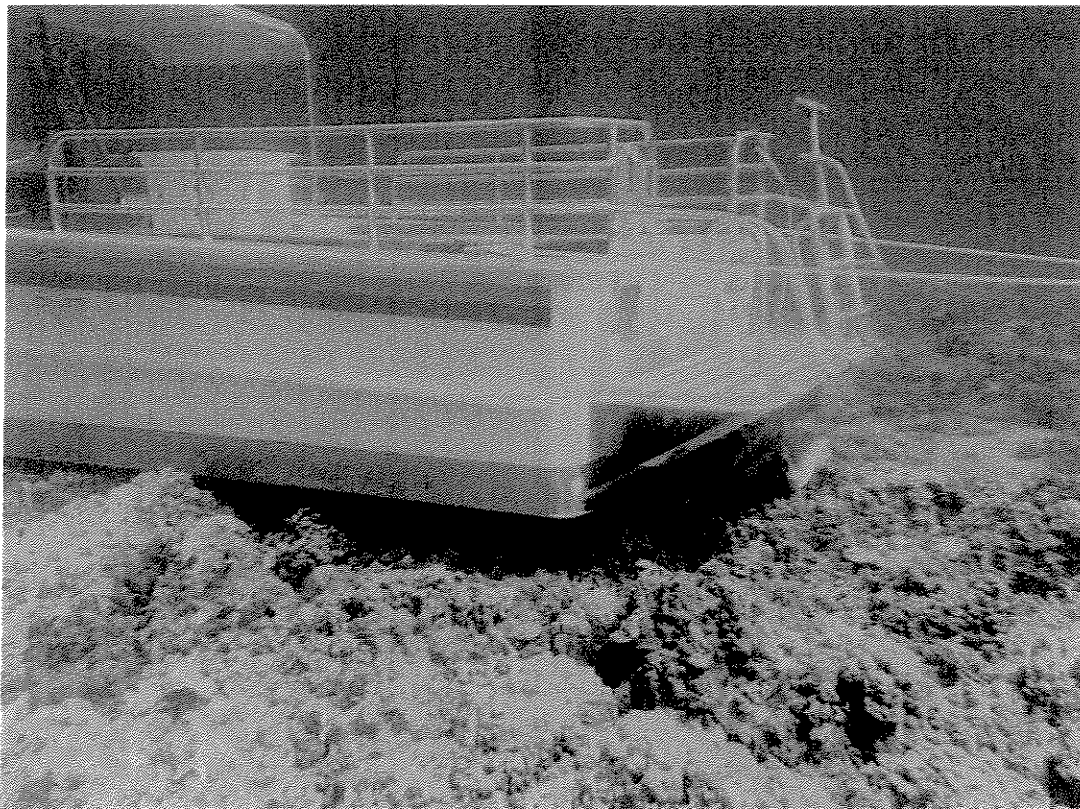


Fig. 22. The vessel lying atop the coral as seen from the stern (*below*). Lines extending shoreward from the stern coalesce into a single line which wraps around an illegal mooring chain around a submerged rock in roughly 12' depth near the shore.



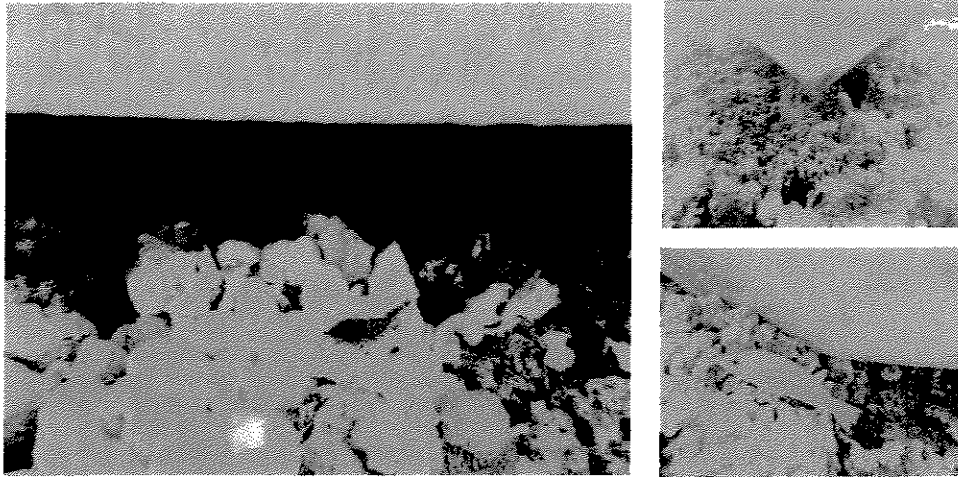


Fig. 23. Various parts of the hull lying atop broken and crushed coral (*above* and *below*).

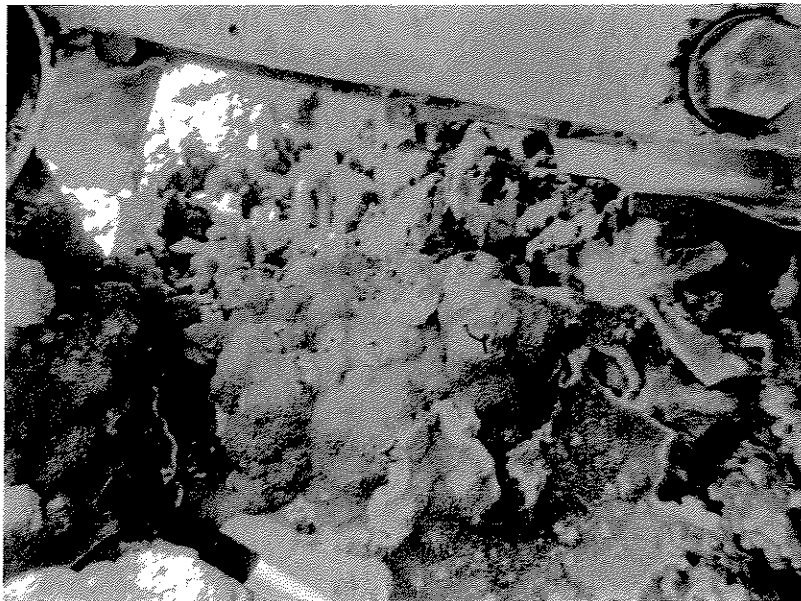
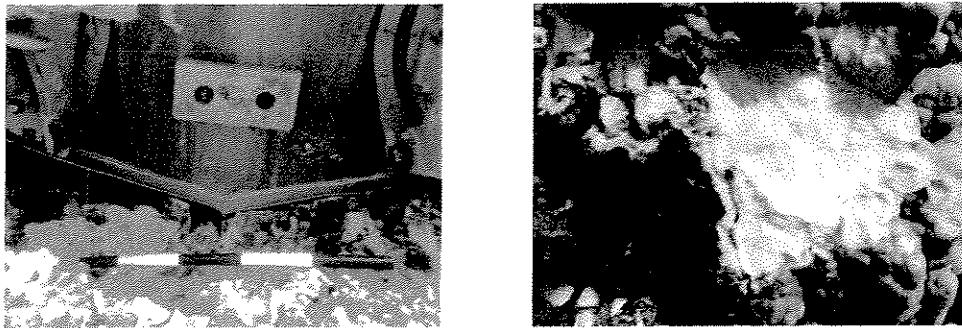


Fig. 24. Portions of the hull lying directly atop live coral (*left*).



Fig. 25. Hull near one of the thruster ports. Note the large broken branch tip of a large *Pocillopora eydouxi* colony (yellow circle); intact large colonies of this species are used by a variety of fish and invertebrates as shelter habitat.

In addition, two 0.2 – 0.3 m diameter freshly broken coral heads were detected due east of the impact sites in the same depth range.

- 6 Some **anchor chain damage** to coral heads from lateral movement of the vessel's deployed anchor chain in approximately 30 – 35' depth. Measured 11.06 m of deployed chain connected to an anchor which was atop the bottom at 38' depth. Figure 26 shows a portion of the anchor chain atop the marine substrate and adjacent to a large *Pocillopora* colony. Note the bright white skeleton on the branch tips, possibly the result of the chain abrading the large coral colony as it moves about the bottom.

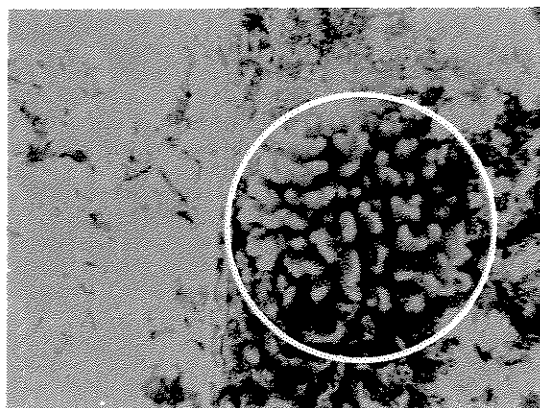


Fig. 26. The deployment of the anchor and chain constitute additional damage not formally measured but also may represent an additional violation through its use if not authorized.

Overall, the DAR team documented damage to live coral, live rock, and geological substrate. Habitat used by various fish and invertebrates for shelter, food and social interactions was disturbed or destroyed. The various major damage components and total are summarized in Table I. Note that all damage other than the Debris Field damage was caused directly by the vessel's hull.

	Injury Site	Injury Area (m ²)
1	Initial Impact Site	29.11 m ²
2	Debris Field	85.75 m ²
3	Dragging Scar	11.09 m ²
4	Secondary Impact Site	43.09 m ²
5	Tertiary Impact Site	22.12 m ²
	Total Damaged Area	192.06 m²

Table I. Measured damage to geological features, live coral and live rock.

PROCESSING OF INJURY SCENE

Three assessment dives were conducted on October 5, 2006. All data sheets were photographed at the end of each dive to substantiate the record.

1. Pre-Assessment Dive.

The function of the dive was to set an impact perimeter around the damaged reef sections to delineate the damaged area; to define the types of habitat and subhabitat affected by this event; and to identify and document the damage pathways. The Pre-Assessment Dive was conducted on October 5, 2006 between 0955 and 1020. All photos were taken by John Mitchell, DAR.

2. Impact Assessment Dives

The two impact assessment dives were the primary evidence collection dives. The function was to document (photograph and measure) specific damage to habitats, subhabitats, bottom substrate, and key species; to document and collect physical and other evidence; and to identify any obvious impacts to users of the area. The impact Assessment dives were conducted on October 5, 2006 between 1040 and 1150; and between 1220 and 1305. All photos were taken by John Mitchell, DAR, scale was provided in many of the photos through use of a archeological black and white half meter stick, with each black or white segment representing 10 cm.. Measurements of damage were conducted by Skippy Hau, DAR, using a printed underwater metric measuring tape. Damage was discerned by the bright white appearance of exposed coral skeleton, indicating very recent injury to live corals.

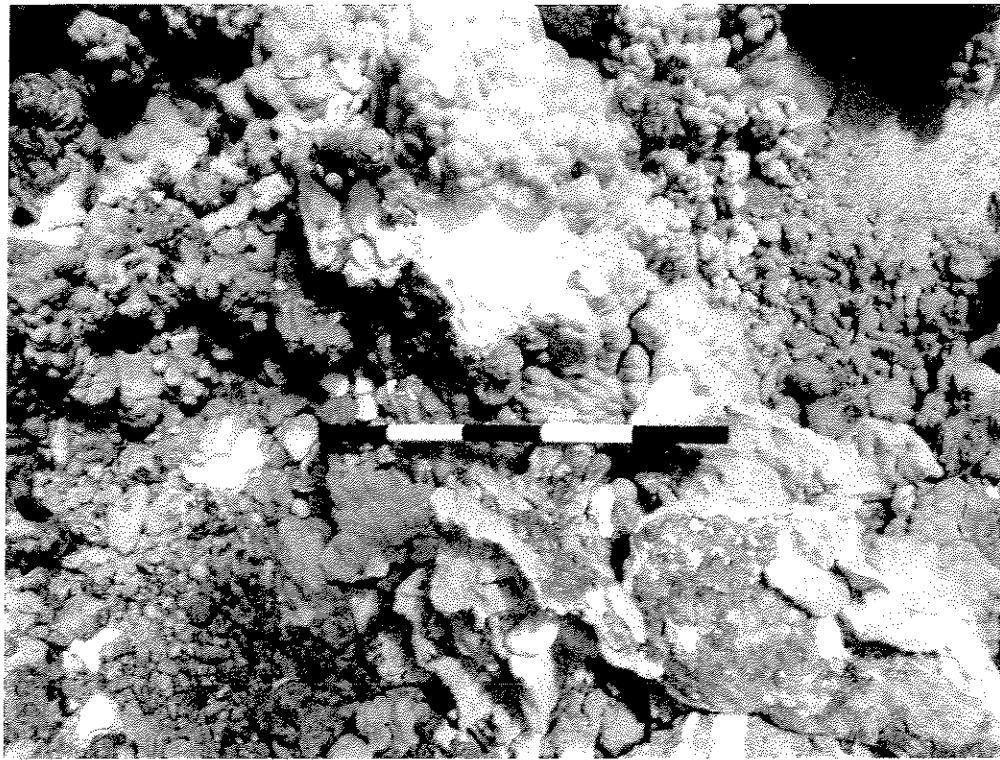
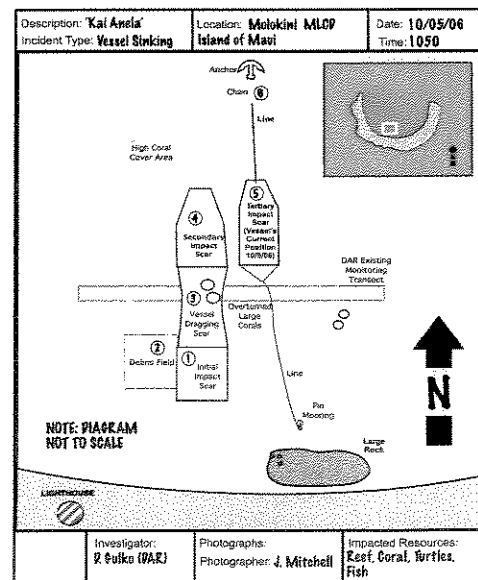


Fig. 27. Examples of fresh coral damage (*above and left*) from the 'Kai Anela' injury as evidenced by bright white skeleton with no wear or organism overgrowth. Contrast against older exposed sections and living coral

EVIDENCE COLLECTION

Certain physical evidence was collected during the Impact Assessment dives which could be used to directly tie the submerged vessel to the areas of damage documented:



(A) Aluminum scrape on smashed coral (Figure 28) was collected from the Vessel Dragging

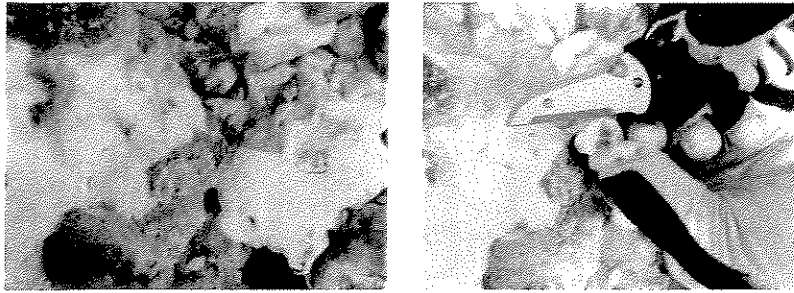


Fig. 28. Photos show in situ shot and collection of evidence underwater.

Scar Site (3). Item was collected by Russell Sparks (DAR).

(B₁) Loose paint flakes found on the marine substrate within the Secondary Impact Site (4).

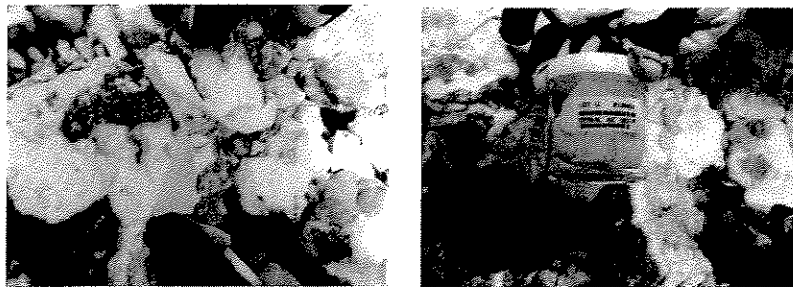


Fig. 29. Photos show in situ shot, and collection of paint flake evidence underwater.

Items were collected by Russell Sparks (DAR) and placed underwater within sealed glass jars (Figure 29).

(B₂) Aluminum scrape on smashed coral was collected from the Secondary Impact Site (4).
Item was collected by DAR's Russell Sparks (Figure 30).



Fig. 30. Photos show in situ shot , collection, and packaging of evidence underwater.

- (C) Aluminum scrape on smashed coral collected from the Initial Impact Site ①. Item was collected by DAR's Russell Sparks (Figure 31).



Fig. 31. Photos show in situ shot , collection, and packaging of scrape evidence underwater.

- (D) Aluminum scrape on smashed coral collected from the Tertiary Impact Site ⑤. Item was collected by DAR's Russell Sparks (Figure 32).



Fig. 32. Photos show in situ shot next to vessel's metal hull , collection, and packaging of scrape evidence underwater.

Paint samples and metal scrapings collected atop the reef were delivered to Lt. Jensen, USCG within the original sealed packaging they were placed into in the field. The maintenance of the samples by DAR and the delivery to the USCG followed established chain-of-custody procedures. Requests were made to the USCG to acquire samples from the ship's hull for comparison by the USCG lab facilities, and for the USCG to share the results with DAR.

All the photos taken by J. Mitchell were immediately transferred to non-rerecordable CD upon return to the DAR office in the afternoon of October 5, 2006. Three duplicate non-rerecordable CDs were created and labeled containing all of Mr. Mitchell's photos. The CDs were placed in sealed manila envelopes and delivered to Lt. Jensen, USCG; Officer Bode, Maui DOCARE; and Dave Gulko, DAR. The maintenance of the CDs by DAR and the delivery to the three parties listed above followed established chain-of-custody procedures.

RAPID ECOLOGICAL ASSESSMENTS

Multiple rapid ecological assessments were done on February, 16, 2007 to establish average coral colony parameters for the injured areas after the vessel was removed. This was done by conducting multiple transects parallel, and adjacent, to each side of the injured areas at the same

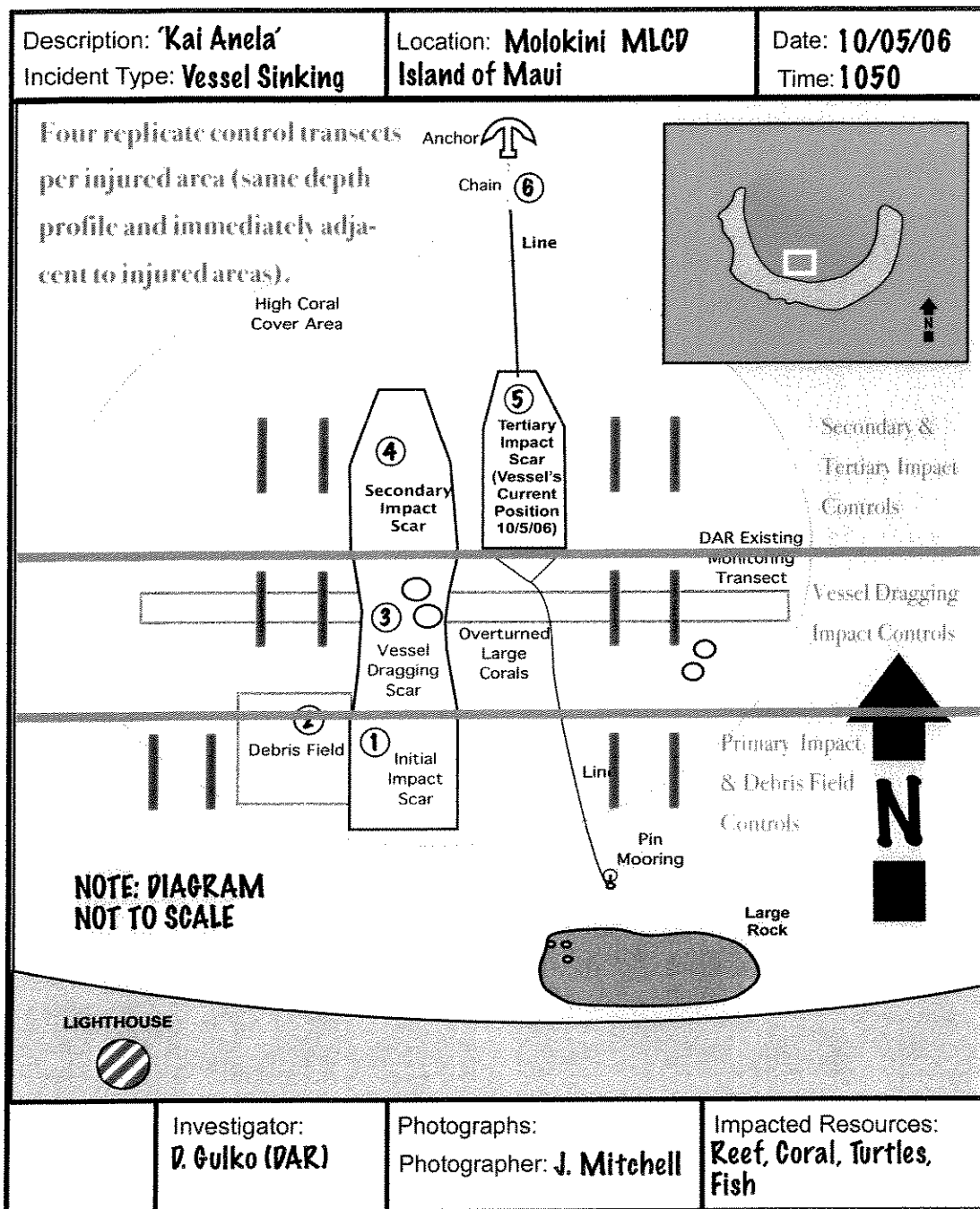
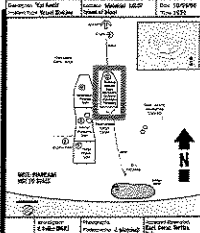
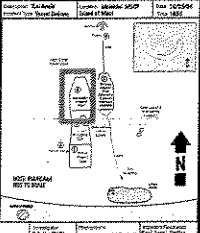


Fig. 33. Diagram showing vessel impact areas and later replicate control transects done for each area. Four parallel control transects were done long the same depth profile and immediately adjacent to the damaged areas; resulting in three sets of control transects as shown.

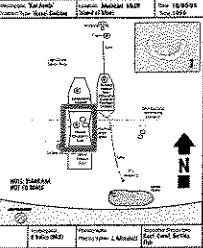
depth profile as shown in Figure 33. This resulted in a total of four replicate 10 m transects for each injured area. Coral transects classified every coral colony by species and size class out to 0.5 m to either side of the transect line resulting in a measurement of coral colony coverage within 10m² for each of the four parallel transects. Estimated number of coral colonies damaged was derived by multiplying the damage area measured (squared meters) times the average number of coral colonies (per species) in the control transects divided by 10 square meters (the area of each control transect surveyed). Confidence intervals at the 90% level were determined using the standard deviation and the number of controls for each derived number of colonies damaged per species. Results are shown in Table II.

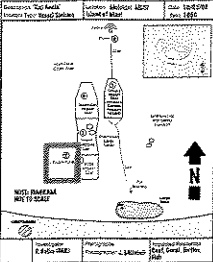
Average
of Coral
Colonies

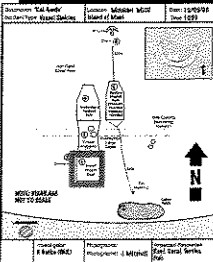
	Tertiary Impact Control per 10m ²	St. Dev	Damage Area (m ²)	Estimated # Colonies Damaged	90% Confidence Limits	Lower Range # Colonies Damage	Higher Range # Colonies Damage
<i>Montipora capitata</i>	23.75	10.84	22.12	53	8.92	44	62
<i>Montipora patula</i>	15.50	4.20	22.12	34	3.46	31	37
<i>Pavona duerdeni</i>	0.00	0.00	22.12	0	0.00	0	0
<i>Pavona varians</i>	2.50	2.52	22.12	6	2.07	4	8
<i>Pocillopora eydouxi</i>	1.00	1.41	22.12	2	1.16	1	3
<i>Pocillopora meandrina</i>	3.75	2.75	22.12	8	2.26	6	10
<i>Porites compressa</i>	8.25	3.40	22.12	18	2.80	15	21
<i>Porites lobata</i>	20.75	7.89	22.12	46	6.49	40	52
				Total Colonies Damaged	167	140	194

	Secun- dary Impact Control per 10m ²	St. Dev	Damage Area (m ²)	Estimated # Colonies Damaged	90% Confidence Limits	Lower Range # Colonies Damage	Higher Range # Colonies Damage
<i>Montipora capitata</i>	23.75	10.84	43.09	102	8.92	93	111

<i>Montipora patula</i>	15.50	4.20	43.09	67		3.46	64	70
<i>Pavona duerdeni</i>	0.00	0.00	43.09	0		0.00	0	0
<i>Pavona varians</i>	2.50	2.52	43.09	11		2.07	9	13
<i>Pocillopora eydouxi</i>	1.00	1.41	43.09	4		1.16	3	5
<i>Pocillopora meandrina</i>	3.75	2.75	43.09	16		2.26	14	18
<i>Porites compressa</i>	8.25	3.40	43.09	36		2.80	33	39
<i>Porites lobata</i>	20.75	7.89	43.09	89		6.49	83	95
				Total Colonies Damaged	325		298	352

	Dragging Scar Controls per 10m2	St. Dev	Damage Area (m2)	Estimated # Colonies Damaged		90% Confidence Limits	Lower Range # Colonies Damage	Higher Range # Colonies Damage
<i>Montipora capitata</i>	18.75	6.55	11.09	21		5.39	16	26
<i>Montipora patula</i>	12.75	6.90	11.09	14		5.67	8	20
<i>Pavona duerdeni</i>	0.00	0.00	11.09	0		0.00	0	0
<i>Pavona varians</i>	2.50	2.08	11.09	3		1.71	1	5
<i>Pocillopora eydouxi</i>	0.50	0.58	11.09	1		0.47	1	1
<i>Pocillopora meandrina</i>	6.00	2.45	11.09	7		2.01	5	9
<i>Porites compressa</i>	3.00	2.16	11.09	3		1.78	1	5
<i>Porites lobata</i>	20.50	8.35	11.09	23		6.86	16	30
				Total Colonies Damaged	71		48	96

	Debris Field Controls per 10m ²	St. Dev	Damage Area (m ²)	Estimated # Colonies Damaged		90% Confidence Limits	Lower Range # Colonies Damage	Higher Range # Colonies Damage
<i>Montipora capitata</i>	22.00	7.57	85.75	189		6.23	182	195
<i>Montipora patula</i>	16.75	8.50	85.75	144		6.99	137	151
<i>Pavona duerdeni</i>	0.00	0.00	85.75	0		0.00	0	0
<i>Pavona varians</i>	0.00	0.00	85.75	0		0.00	0	0
<i>Pocillopora eydouxi</i>	0.75	1.50	85.75	6		1.23	5	8
<i>Pocillopora meandrina</i>	7.00	4.55	85.75	60		3.74	56	64
<i>Porites compressa</i>	0.50	0.58	85.75	4		0.47	4	5
<i>Porites lobata</i>	22.75	10.87	85.75	195		8.94	186	204
				Total Colonies Damaged	598		571	626

	Initial Impact Controls per 10m ²	St. Dev	Damage Area (m ²)	Estimated # Colonies Damaged		90% Confidence Limits	Lower Range # Colonies Damage	Higher Range # Colonies Damage
<i>Montipora capitata</i>	22.00	7.57	29.11	64		6.23	58	70
<i>Montipora patula</i>	16.75	8.50	29.11	49		6.99	42	56
<i>Pavona duerdeni</i>	0.00	0.00	29.11	0		0.00	0	0
<i>Pavona varians</i>	0.00	0.00	29.11	0		0.00	0	0
<i>Pocillopora eydouxi</i>	0.75	1.50	29.11	2		1.23	1	3
<i>Pocillopora meandrina</i>	7.00	4.55	29.11	20		3.74	16	24

<i>Porites compressa</i>	0.50	0.58	29.11	1		0.47	1	1
<i>Porites lobata</i>	22.75	10.87	29.11	66		8.94	57	75
				Total Colonies Damaged	203		174	230

**All Colonies
Damaged by
the Vessel Hull** **766 +/- 105**

**All Colonies
Damaged** **1362 +/- 132**

Table II. Determination of damaged coral colonies within each impact area by comparison with averages of four control transects within each depth contour adjacent to each impact area.

Concerns regarding pre-existing damage to reef substrate resources (versus that caused by the RP) were measured by comparison of loose coral fragments within each of the impact areas versus the twelve control transects conducted immediately adjacent to the documented impact areas (Figure 32). The extremely large number of fragments found within impact areas (labeled 'Impact') versus the almost complete lack of fragments found adjacent to these areas (labeled 'Control') suggests that the reef substrate was relatively intact immediately prior to this incident, and therefore the damage noted was due to this series of incidents by the RP.

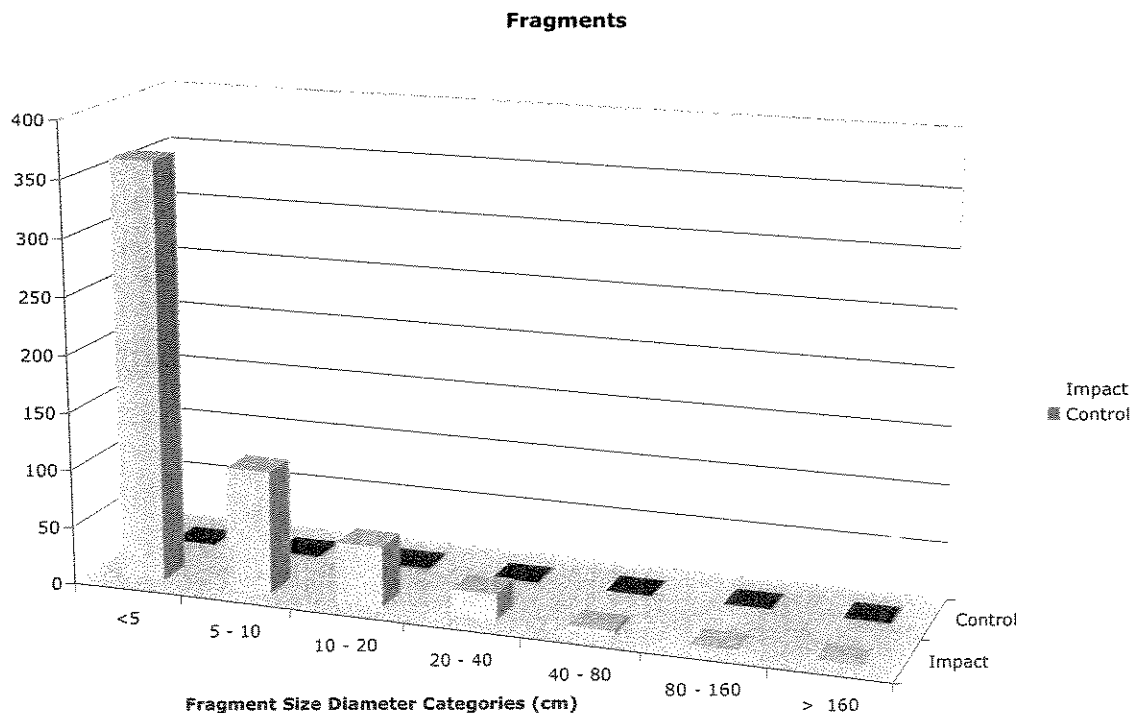


Fig. 32. Comparison of loose coral fragments documented within all impact areas (5) versus all control areas (12).

ANALYSIS

Damage caused by this event consisted of four distinctively measurable hull impact scars, with direct links to each other, suggesting a progression of impacts over time (see attached diagram). The impact scar areas occur within an area at Molokini where DAR has long-term monitoring data suggesting (as does the pre-assessment) that pre-existing coral cover was extremely high (actually, unusually high for this depth zone at Molokini), approaching 80 – 85%. Such areas usually support both high biomass and biodiversity of coral reef fishes and invertebrates which make use of the shelter and food habitats afforded by this high living coral cover.

It appears (Figure 33) that the vessel sank originally in what we termed the Initial Impact

Scar (1). At some point between September 30 and Oct 4, 2006, the vessel was purposely dragged across the coral to place it in slightly deeper water for a salvage attempt, this resulted in the Dragging Scar (3) and the Secondary Impact Scar (4). We are not sure of the mechanism that caused the debris field (2), but this could have been a product of the attempt to initially drag the vessel into a slightly deeper depth. A second attempt to salvage the vessel failed and the vessel sank back down to the bottom settling in a new position (5). At this point, attempts were made to stabilize the vessel on the bottom, resulting in a stern line running towards shore and deployment of the anchor line and chain northwards into deeper water (6).

Significant questions currently exist as to whether the Responsible Party (RP) needed to cause the series of damaging impacts that occurred after the initial sinkage event, relative to their response activities and the limited influence of DLNR in their on-site salvage activities within the MLC.

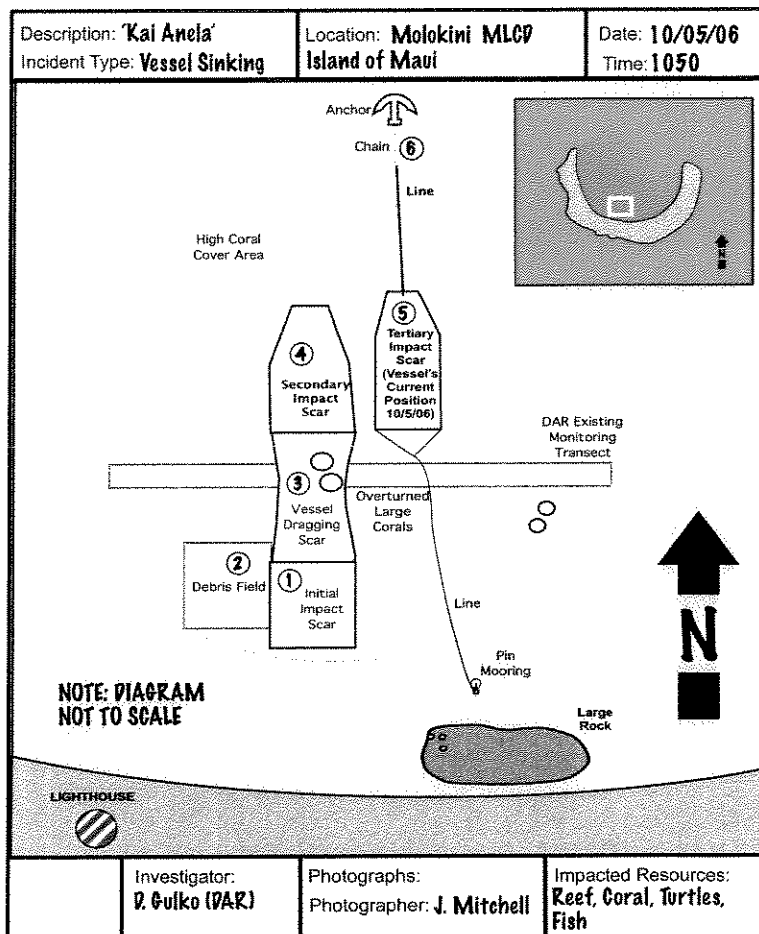


Fig. 33. Overview of injured areas (#1 - 6).

It is clear that activities undertaken by the RP caused extensive damage to one of the few shallow water, high coral cover, reef areas at Molokini MLCD.

The Rubble Issue: While we do not have any direct evidence that the vessel hull sat atop or dragged over the 'Debris Field' area, it clearly was impacted from this event due to the amount of loose rubble and debris deposited there. The loose debris and especially the rubble, lay atop both live rock and live coral colonies present at the site pre-impact. Contact with rubble will damage live coral, and if persistent could result in its mortality. Once again, as fully-protected resources within the MLCD, all directed damage constitutes a take under the law. There is no question that damage to reef resources resulted from the material being deposited atop the live reef in this area.

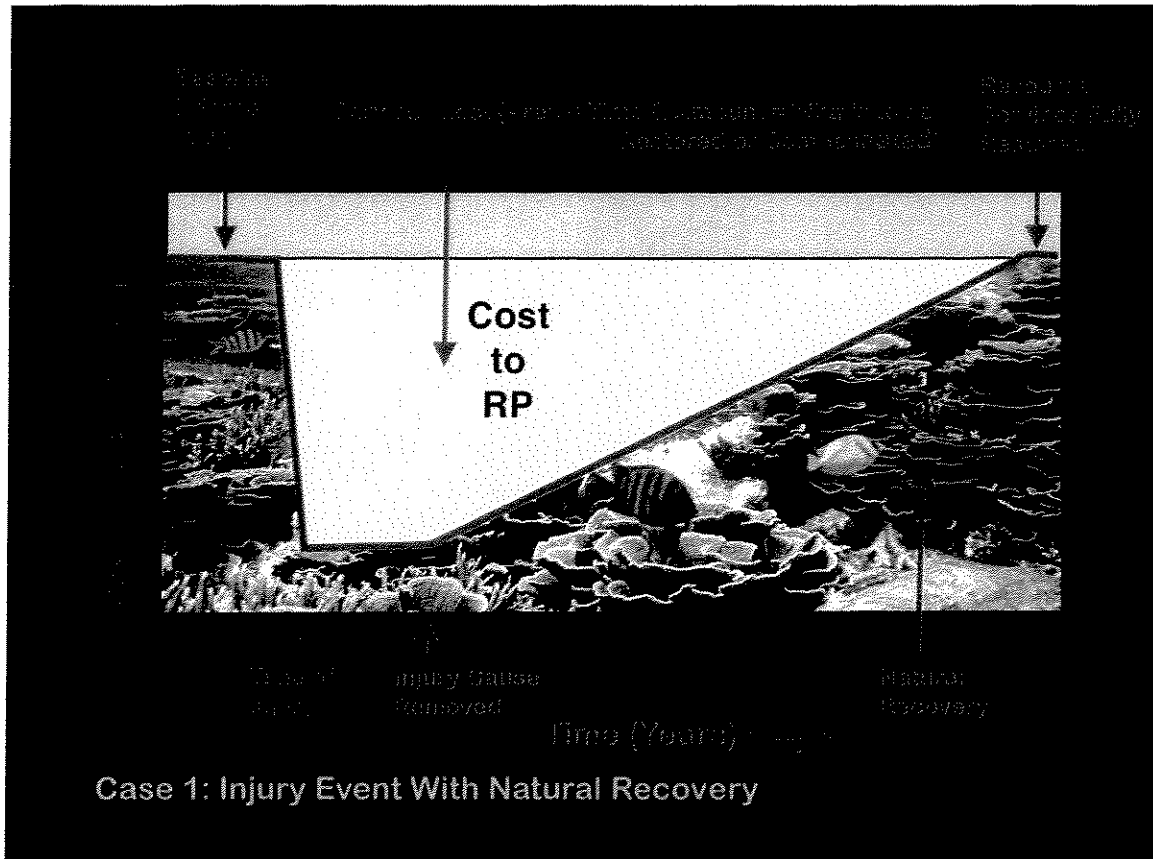


Fig. 34. Generalized representation of recovery elements involved in reef injuries such as those caused by the 'Kai Anela' incident (after Gulko *et al*, 2007).

Recovery Estimates: Given published growth rates for *Porites lobata* from the Main Hawaiian Islands averaging around 1 cm/yr linear growth; we estimate that the recovery time for colonies in the 80 cm - 160 cm range (largest colonies measured in the control areas adjacent to the impact sites) will take at least **80 years**². Therefore the reef ecosystem in this area of the

² Note that this is a conservative estimate which used the lowest size measurement in this class; conversely it could take upwards of 160 years to fully recover the lost resources from this event if the largest colonies were impacted.

Molokini MLCD would not be expected to fully recover until such time as the full assemblage of coral colonies in the size ranges that were present prior to this damage, re-establish themselves completely, and allow the full variety of associated reef fish, sea turtles, and invertebrates to make use of the ecological functions they provided prior to this series of impacts by the RP. Note that this recovery estimate assumes optimal conditions exist at the site, such conditions would be more likely if the impacted area and a small buffer around it were placed off-limits to any commercial activity to allow for minimal disturbance during the recovery period.

The Big Picture: DAR's measurements of damage are conservative in nature as we have not included all damaged corals from this series of injury events (we excluded some colonies outside of the measured damage areas and the damaged corals associated with the deployment of the anchor and mooring lines), we used the minimum size within the size classes to estimate recovery, and we did not specifically measure damage to live rock or geological substrate (both fully protected as is coral within the Molokini MLCD); nor did we conduct a full REA in order to try and determine overall ecological functional losses from the series of injuries that occurred. Instead we have provided damage to coral as one measure of the impacts to ecological services and protected resources within the no-take MLCD from this series of injury events. To be clear, the damages that resulted encompassed effects on all reef elements within the affected and adjacent areas, including (but not limited to), reef fish, sea turtles³, coral, live rock, coralline algae, molluscs, crabs, shrimp & lobster. The impacts incurred resulted in not only damages over a relatively large physical area (represented in our data as the number of coral colonies damaged) but in a significant loss over time whereby the affected reef will not function (and the public will not have use of its services) ecologically at the pre-injury level for over eighty years. The sum of our efforts form a picture of a overall physical loss along with a minimum projected recovery time (to recover the lost resources ecologically) of unprecedented magnitude for the no-take Molokini MLCD. The result is a significant range of damage over both time and space (Figure 34) for which Maui Dive Shop is clearly responsible, and therefore is in violation of its permits allowing it the privilege of operating commercially within this extremely small and heavily-used marine protected area.

OUTSTANDING ELEMENTS & ITEMS PENDING

DAR never received a copy of the USCG's formal investigative report and findings regarding this series of incidents. DAR had requested copies of this report along with analysis of evidence collected by DAR and transferred over to the USCG.

Discussions need to occur within DAR regarding the need for restoration, mitigation and monitoring for damaged marine substrate and coral reef habitat as a result of these incidents. A full-scale natural resource biological assessment should be conducted through DLNR exclusively, or in concert with our federal and State resource trustee partners, at this site in the near future. Clearly long-term monitoring will be required on a frequent basis to ensure that recovery remains a natural process and is not re-directed towards invasive species within the large open scar areas. DLNR should consider put resources into modifying commercial permit holders use, numbers, and activities at Molokini MLCD or should at least consider setting the damaged areas aside, along with a reasonable buffer, in order to maximize recovery. Given that that the Molokini MLCD already has 41 permit holders allowed to moor within a extremely small area; allowing

³ Both endangered Hawaiian hawksbill and threatened Hawaiian green sea turtles are known to frequent the area.

this highly damaged area time to recover may require a significant consideration by DLNR of vessel size and numbers allowed to operate within the MLCD.

CONTACT INFORMATION ASSOCIATED WITH THIS INVESTIGATION

DAR Field Investigative Team:

Dave Gulko, DAR Lead Investigator - (808) 587-0318

Skippy Hau, Maui DAR Biologist - (808) 243-5834

Russell Sparks, Maui DAR I & E Specialist - (808) 243-5832

John Mitchell, Maui DAR Technician - (808) 243-5832

Other Investigative Efforts:

Lt. Jensen, Maui USCG Investigation (FOSC) - (808) 873-3105

Officer Ken Bode, Maui DOCARE Investigation - (808) 243-5173

Paul Chang, DOH HEER (SOSC) - (808) 306-0739

Responsible Party Contacts:

RP: Jeff Strahn, Owner, Maui Dive Shop

Dennis Smith, Salvage Master

For more information, or if you have any concerns regarding this material, please contact Dave Gulko, Division of Aquatic Resources Coral Reef Biologist (587-0318).





STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF AQUATIC RESOURCES
1151 PUNCHBOWL STREET
HONOLULU, HAWAII 96813

PETER T. YOUNG
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

ROBERT K. MASUDA
DEPUTY DIRECTOR - LAND

DEAN NAKANO
ACTING DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAMOOLOAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

MARINE LIFE CONSERVATION DISTRICT USE PERMIT FOR:
COMMERCIAL ACTIVITIES IN THE MOLOKINI SHOAL
MARINE LIFE CONSERVATION DISTRICT

The Board of Land and Natural Resources hereby grants permission under the authority of Title 13, Chapter 31, Section 5, Hawaii Administrative Rules (HAR), and all other applicable laws, to:

NAME Mau Snorkel Charters Inc
MAILING ADDRESS 1455 South Kihai Rd. Kihui, HI 96753
PHONE NO. 879-1775 x3

PROPOSED ACTIVITIES:

Snorkeling

VESSEL NAME, AND HA. NO. OR VESSEL DOCUMENT NO.

Kai Anela D1065763

PERMIT NUMBER: 030

for the following purpose:

This permit allows commercial activities (not including the taking of marine life) within the Molokini Shoal Marine Life Conservation District (MLCD) under the terms and conditions listed below:

1. The permittee shall comply with all applicable provisions of the Department of Land and Natural Resources HAR, Chapter 13-31, and other applicable laws not exempted by this permit.
2. Discretion shall be used to avoid conflict with divers, swimmers and others while conducting commercial activities.
3. This permit does not authorize the primary permittee or any designated assistant to engage in any other activity that violates any other State, Federal or County law, regulation or ordinance.
4. The permittee shall be responsible and accountable for all actions under this permit.
5. This permit shall be in effect for a two year period, and for a non-refundable \$50.00 fee, from 12/16/05 to 12/15/07 for the activities as specified.
6. Prior to its expiration, the permittee shall apply for reissuance of this permit; failure to do so will result in the automatic expiration of the permit at the end of its term. The permittee must return this permit by United States mail or by hand delivery to the Division of Aquatic Resources, 1151

EXHIBIT B

CHAPTER 190
MARINE LIFE CONSERVATION PROGRAM

Section

- 190-1 Conservation area; administration
- 190-1.5 State marine waters
- 190-2 Establishment and modifications of conservation district
- 190-3 Rules
- 190-4 Permits
- 190-4.5 Anchoring, boating, and mooring in marine life conservation districts; rules
- 190-5 Penalty

[Previous](#)[Vol03_Ch0121-0200D](#)[Next](#)**EXHIBIT C**

§190-1 Conservation area; administration. All marine waters of the State are hereby constituted a marine life conservation area to be administered by the department of land and natural resources subject to this chapter and any other applicable laws not inconsistent herewith or with any rules adopted pursuant hereto. No person shall fish for or take any fish, crustacean, mollusk, live coral, algae or other marine life, or take or alter any rock, coral, sand or other geological feature within any conservation district established pursuant to this chapter except in accordance with section 190-4 and rules adopted by the department pursuant hereto. [L 1955, c 192, §2; RL 1955, §21-131; am L Sp 1959 2d, c 1, §22; am L 1961, c 132, §2; HRS §190-1; am L 1981, c 16, §1]

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[\$190-1.5] State marine waters. As used in this chapter, state marine waters shall be defined as extending from the upper reaches of the wash of the waves on shore seaward to the limit of the State's police power and management authority, including the United States territorial sea, notwithstanding any law to the contrary. [L 1990, c 126, §4]

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§190-2 Establishment and modifications of conservation district. The department of land and natural resources may establish and from time to time modify the limits of one or more conservation districts in each county and may, if it deems necessary, declare all waters within any county a conservation district. [L 1955, c 192, §5; RL 1955, §21-134; am L Sp 1959 2d, c 1, §22; am L 1961, c 132, §2; HRS §190-2]

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§190-3 Rules. The department of land and natural resources pursuant to chapter 91, shall adopt rules governing the taking or conservation of fish, crustacean, mollusk, live coral, algae, or other marine life as it determines will further the state policy of conserving, supplementing and increasing the State's marine resources. The rules may prohibit activities that may disturb, degrade, or alter the marine environment, establish open and closed seasons, designate areas in which all or any one or more of certain species of fish or marine life may not be taken, prescribe and limit the methods of fishing, including the type and mesh and other description of nets, traps, and appliances, and otherwise regulate the fishing and taking of marine life either generally throughout the State or in specified districts or areas. The rules shall upon taking effect supersede any state laws inconsistent therewith. [L 1955, c 192, §6; RL 1955, §21-135; am L Sp 1959 2d, c 1, §22; am L 1961, c 132, §2; HRS §190-3; am L 1981, c 16, §2]

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§190-4 Permits. The department of land and natural resources may, in any conservation district, prohibit the taking of marine life or the engaging in activities prohibited by this chapter and rules adopted thereunder, except by permit issued by it for scientific, education, or other public purposes on such terms and conditions deemed necessary to minimize any adverse effect within the conservation district. The department may revoke any permit for any infraction of the terms and conditions of the permit. Any person whose permit has been revoked shall not be eligible to apply for another permit until the expiration of one year from the date of revocation. [L 1955, c 192, §7; RL 1955, §21-136; am L Sp 1959 2d, c 1, §22; am L 1961, c 132, §2; HRS §190-4; am L 1981, c 16, §3]

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§190-4.5 Anchoring, boating, and mooring in marine life conservation districts; rules. (a) The department shall, pursuant to chapter 91, adopt rules for the regulation of anchoring and mooring in each marine life conservation district established under this chapter.

(b) Within its jurisdiction over ocean recreational boating and coastal activities, the department shall adopt rules pursuant to chapter 91 for the regulation of boating in each marine life conservation district established under this chapter. [L 1988, c 381, §1; am L 1991, c 183, §1]

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§190-5 Penalty. (a) Any person violating this chapter, any rule adopted pursuant thereto, or the terms and conditions of any permit issued under section 190-4, shall be guilty of a petty misdemeanor and punished as provided in subsections (b) and (c).

(b) The punishment, in addition to any other penalties, shall be a fine of not less than:

- (1) \$250 for a first offense;
- (2) \$500 for a second offense; and
- (3) \$1,000 for a third or subsequent offense.

(c) The fines specified in this section shall not be suspended or waived. [L 1955, c 192, §8; RL 1955, §21-137; HRS §190-5; am L 1981, c 16, §4; am L 1999, c 195, §9]

Cross References

General administrative penalties, see §187A-12.5.

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HAWAII ADMINISTRATIVE RULES

TITLE 13

DEPARTMENT OF LAND AND NATURAL RESOURCES

SUBTITLE 4 FISHERIES

PART I MARINE LIFE CONSERVATION DISTRICTS

CHAPTER 31

MOLOKINI SHOAL MARINE LIFE CONSERVATION DISTRICT, MAUI

- §13-31-1 Definitions
- §13-31-2 Boundaries
- §13-31-3 Prohibited activities
- §13-31-4 Allowed activities
- §13-31-5 Exceptions; permits
- §13-31-6 Penalty

Historical note: Chapter 31 of title 13 is based substantially upon regulation 42 of the division of fish and game, department of land and natural resources, State of Hawaii. [Eff. 7/8/77; R May 26, 1981]

§13-31-1 Definitions. As used in this chapter unless otherwise provided:

- "Trolling" means trailing a line attached to either a baited hook or artificial lure from a boat moving faster than slow-no-wake speed;
- "Slow-no-wake" means as slow as possible without losing steerage way and so as to make the least possible wake. This would almost always mean speeds of less than five miles per hour;
- "Demonstrate" as is used in section 13-31-5(3) means proof such as in any combination of documents including but not limited to copies of commercial licenses, excise tax reports, brochures, affidavits, etc. The burden of proof lies with the applicant.
- "Active commercial vessel operation" as used in section 13-31-5(3) means use no less than two times every quarter over four quarters (12 months) and greater than eight times per year. [Eff and comp SEP 1 6 1995] (Auth: HRS §190-3) (Imp: §§190-3, 190-4.5)

§13-31-2 Boundaries. The Molokini shoal marine life

31-1

1 859/ 1

31-2

1 859'

EXHIBIT D

UNOFFICIAL SIZE

conservation district shall include subzones A and B of that portion of the submerged lands and overlying waters surrounding Molokini islet, county of Maui, as follows:

- (1) Subzone A is defined as that portion of submerged lands and overlying waters within the crater, beginning at a point at the highwater mark of Lailali Point, then along the highwater mark of the northern shoreline eastward until Pahee O Lono Point, then west along a straight line to the end of the submerged ridge (shoal) extending from Lailali Point, then along the top of the shoal back to the point of beginning; and
- (2) Subzone B is defined as that portion of submerged lands and overlying waters outside the crater, encircling the islet out to 100 yards, seaward of the point of beginning at the highwater mark of Lailali Point, then eastward along the highwater mark of the southern shoreline of the islet to Pahee O Lono Point, then west along a straight line from Pahee O Lono Point to the end of the shoal extending from Lailali Point, then along the top of the shoal back to the point of beginning.

Subzone areas A and B are illustrated in "Map of Molokini Shoal Marine Life Conservation District, Maui 1/18/94" attached at the end of this chapter. [Eff: 5/26/1981; am. ren, and comp SEP 1 6 1995] (Auth: HRS §190-3) (Imp: HRS §§190-1, 190-2, 190-3)

§13-31-3 Prohibited activities. No person shall engage in the following activities in the Molokini shoal marine life conservation district:

- (1) Fish for, catch, take, injure, kill, possess, or remove any finfish, crustacean, mollusk including sea shell and ophi, live coral, algae or limu, or other marine life, or eggs thereof except as provided for in section 13-31-4(1);
- (2) Have or possess in the water, any spear, trap, net, crowbar, or any other device that may be used for the taking or altering of marine life, geological feature, or specimen;
- (3) Take, alter, deface, destroy, possess, or remove any sand, coral, rock, or other geological feature, or specimen;
- (4) Feed or deliberately introduce any food material, substance, or attractant, directly to or in the vicinity of any aquatic organism, by any means for any purpose except as provided in section 13-31-4(1);
- (5) Moor boats for commercial activities except as provided for in section 13-31-5; or

- (6) Anchor a boat when a day use mooring system and management plan is established by this department. [Eff: 5/26/1981; am, ren, and comp SEP 16 1995] (Auth: §§190-3, 190-4.5) (Imp: HRS §§190-1, 190-3, 190-4.5)

§13-31-4 Allowed activities. A person may:

- (1) Fish for, catch, take, possess, or remove any finfish by trolling in subzone 8 only;
- (2) Possess in the water, any knife and any shark billy, bang stick, powerhead, or carbon dioxide (CO₂) injector for the sole purpose of personal safety. [Eff: 5/26/1981; am, ren, and comp SEP 16 1995] (Auth: HRS §§190-3, 190-4.5) (Imp: HRS §§190-1, 190-3, 190-4.5)

§13-31-5 Exceptions, permits. The department may issue permits to engage in activities otherwise prohibited by law and section 13-31-3, under such terms and conditions it deems necessary to carry out the purpose of chapter 190, Hawaii Revised statutes:

- (1) To take for scientific, propagation, or other purposes in conformance with chapter 190 and section 187A-6, Hawaii Revised Statutes, any form of marine life or eggs thereof otherwise prohibited by law;
- (2) Except as provided in chapter 13-257, subchapter 4, to engage in commercial activity, excluding the taking of marine life, with a marine life conservation district use permit. Each boat shall be required to obtain a separate permit. An applicant for this permit shall pay a non-refundable permit fee of \$50 valid for a two-year duration. Prior to its expiration, the permittee may apply for reissuance. Unless the permit is reissued, it shall automatically expire on the expiration date. The permittee shall indemnify, defend, and hold harmless the State of Hawaii, its successors, assigns, officers, employees, contractors, and agents from and against any loss, liability, claim or demand for property damage, personal injury and death arising from any act or omission related to this permit;
- (3) An application for this permit shall be accepted only from a commercial operator who can demonstrate active commercial vessel operation within the Molokini shoal marine life conservation district within the twelve-month period immediately prior to the effective date of these rules, and possesses a commercial vessel use

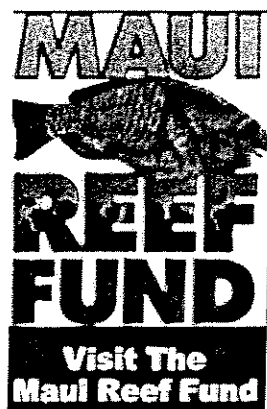
- (4) The permit shall be incorporated as an addendum to the commercial vessel use permit for the use of state boating facilities issued in accordance with section 13-231-57, or a commercial vessel registration issued in accordance with section 13-256-4. No application for a permit shall be accepted after ninety days of the effective date of these rules;
- (5) The permit shall be non-transferrable, except as provided by section 13-231-62; and
- (6) The board may revoke any permit for any infraction of the terms and conditions of the permit, and a person whose permit is revoked shall not be eligible to renew a permit until the expiration of one year from the date of revocation. [Eff: 5/26/1981; am 3/2/1987; am, ren, and comp SEP 16 1995] (Auth: §§187A-6, 190-3, 190-4.5) (Imp: HRS §§187A-6, 190-4)

§13-31-6 Penalty. A person violating the provisions of this chapter or the terms and conditions of any permit issued as provided by this chapter, shall be punished as provided by law. [Eff: 5/26/1981; am, ren, and comp SEP 16 1995] (Auth: HRS §§190-3, 190-4.5) (Imp: HRS §§190-5)



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3 Hour Molokini & Turtle Town
Coral Gardens
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Driving Directions
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Maui Dive Shop Snorkel Trips

Kai Anela is our 32' Snorkel Boat that takes up to 24 snorkelers out of Kihei Boat Ramp. It's our V-Hull, twin-engine, jet driven vessel providing comfortable seating and amenities for a quick, safe, convenient ride to each location. Each boat is equipped with a marine head (bathroom), fresh water shower, padded seating, refreshments, and all necessary safety equipment. Minimum age is 4.



Knowledgeable crewmembers will provide onboard briefing to familiarize you with the boat, our equipment, and the spectacular marine life.

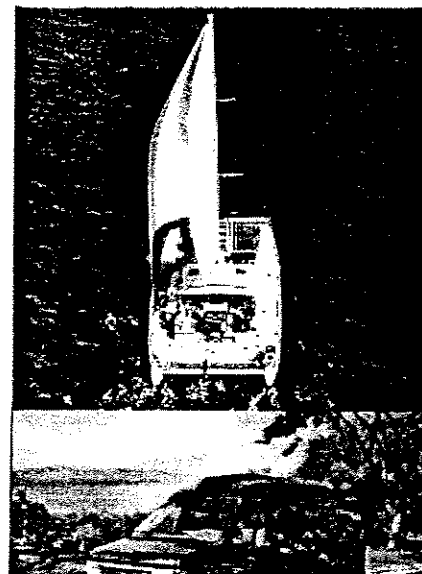
All prices are subject to change without notice. Prices are subject to tax and harbor fees. There is a 24 hour cancellation policy for all dive and snorkel trips.

10% off qualified activities after your first activity booking

ALL TRIPS DEPART FROM KIHAI BOAT RAMP "KAI ANELA" (32 FT.)			
DAY	TIME	DESTINATION	COST
Daily	7:00 am	Molokini Crater / Turtle Town	\$49.95 / Adult
	-		\$44.95 / Ages 4-12
	10:15 am	(3 hours)	Private Charter \$1050.00

Alii Nui is our newest addition to Maui Dive Shop. Measuring an impressive 60' from stem to stern; the Alii Nui is exceptionally well maintained. Licensed for 45 passengers, however restricted to 36 passengers to provide superior service, Alii Nui is under sail whenever possible (depending on winds). If you would like to see turtles, this is the trip to book!

Alii Nui frequents a scheduled coral reef abounding with colorful reef fish. You can participate in a guided "snorkel safari" with our trained water specialist; snorkeling on a secluded reef abundant with sea life including the green sea turtle, an endangered species. All snorkeling equipment is provided complimentary including optical masks and wet suits. There are also "boogie boards" with viewers used as a floatation device. Instruction is given to individual needs and level of experience. Continental breakfast, mid morning snack and lunch are provided as well as beer, wine, soda and



champagne.

Private Rates available upon request..

Alii Nui Limo Van (Available from Kihei & Wailea Locations)

Leave the driving to us! Experience the comfort and ease of our limo van transportation service available from the Kihei and Wailea resort areas. Our deluxe eight passenger limo van will pick up and return you to your hotel or condo in style. This service is offered on our Morning Snorkel and Sunset Sail adventures.

COST: Adult \$20.00 ~ Children \$10.00 (4-12)

VISIT THE ALII NUI WEBSITE For Sunset Sail and Whale Watch details.

All Prices are subject to change without notice. Tax and Harbor fees not included.

ALL TRIPS DEPART FROM MAALAEA HARBOR - Slip 56 "ALII NUI" (60 FT.)			
DAY	TIME	DESTINATION	COST
Daily	8:00 am - 1:00 pm	Olowalu (West Maui) (5 hours)	\$105.00 / Adult \$85.00 / Ages 13-17 \$65.00 / Ages 4-12

We offer small group, Snorkeling trips to at least two different destinations every day of the week. Maka Koa is our Pro 48' Dive Boat that takes up to 24 snorkelers out of Maalaea Harbor. It's our V-Hull, twin-engine, jet driven vessel providing comfortable seating and amenities for a quick, safe, convenient ride to each snorkel location. Each boat is equipped with a marine head (bathroom), fresh water shower, padded seating, refreshments, and all necessary safety equipment.



Knowledgeable crewmembers will provide onboard briefing to familiarize you with the boat, our equipment, and the spectacular marine life. We also offer DIGITAL Video services onboard.

All Prices are subject to change without notice. Tax and Harbor fees not included.

ALL TRIPS DEPART FROM MAALAEA HARBOR "MAKA KOA" (PRO 48 FT.)			
DAY	TIME	DESTINATION	COST
Monday	1:00 pm	Coral Gardens / West Maui (2.5 hours)	\$39.95 per Snorkeler \$109.95 per 1 Tank Intro Dive \$79.95 per certified diver
Wednesday	1:00	Coral Gardens / West Maui	\$39.95 per Snorkeler \$109.95 per certified diver

	pm	(4.5 hours)	\$139.95 per 2 Tank Intro Dive
Friday	1:00 pm	Coral Gardens / West Maui (2.5 hours)	\$39.95 per Snorkeler \$109.95 per 1 Tank Intro Dive \$79.95 per certified diver
Sunday	1:00 pm	Coral Gardens / West Maui (2.5 hours)	\$39.95 per Snorkeler \$109.95 per 1 Tank Intro Dive \$79.95 per certified diver

[return to top](#)

1.800.542.DIVE (3483) | info@mauidiveshop.com

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Salvage Plan #1

Stage #1 (Stabilize)

- Make off lines first (anchor, bridle stern) on Kai Anela
- Place four sand bags – two aft with plywood, one starboard, one port at side gate
- Pre-install and attach pump out hose in forward hold and two hoses in engine room compartment.
- Use weight and line to secure pump hoses
- Bridle stern of Kai Anela to aft pin
- Place air hoses to each diver team and air compressors on Maka Koa
- Insert banana air bag into mid ship
- Attach four 1000 pound lift bags to cleats (as per diagram Step #1)
- Start filling all bags
- Slowly lift vessel to 15' above the bottom
- Fill in a systematic method so that the vessel rises equally
- Bag One - Forward starboard
- Bag Two – Aft starboard
- Bag Three – Aft port
- Bag Four – Forward Port
- Lift divers will watch and maintain scope of stern lines

Stage #2 (Extra Lift)

- Attach safety line from Kai Anela bow to stern bridle of Maka Koa
- Start with aft pillow bags (aft port, aft starboard) installation
- Install port side first and then starboard
- Install forward pillow bag (forward port, forward starboard)
- Install port side first and then starboard
- Slowly inflate bags in a systematic order

- Inflate pillows bags until gunnels are above water line

Stage #3 (Pump Out)

- Attach pre-installed hose to pump out pump
- Prime and start pumps
- Pump until vessel is stable on top of the water
- Board vessel with wet suit and buoyancy vest to finalize pumping

Stage #4 (Towing)

- Release all anchor and stern line from pins to Kai Anela
- Once vessel is floating on its own, remove all lift bags
- Tow Kai Anela with Maka Koa to Kihei Boat Ramp
- Ala Kai II to follow entire way to Kihei Boat Ramp for assistance
- 17' Whaler to follow to Kihei Boat Ramp
- Ala Kai II escorts Kai Anela into Kihei Boat Ramp
- Load on Kai Anela trailer

Stage #4B (Contingency Plan)

- If Kai Anela is unable to be lifted sufficiently to pump out all water to stabilize the vessel
- Secure air bags in place
- Add additional buoyancy if needed
- Follow charted course to Maalaea Harbor
- Secure vessel at pier
- Remove with crane

Underwater Communication Plan

All eyes of lift teams shall be trained on lift team coordinator at all times during lifting.

Hand Signals to Be Used Between Lift Coordinator and Lift Teams

Communication to each team will begin by pointing to a specific team and then using the following hand signals:

THUMBS UP = Slow Addition of Air to Lift bag

THUMBS DOWN = Activate Dump Valve to remove Air from Bag

FLAT OPEN HAND = Stop at Current Buoyancy Level

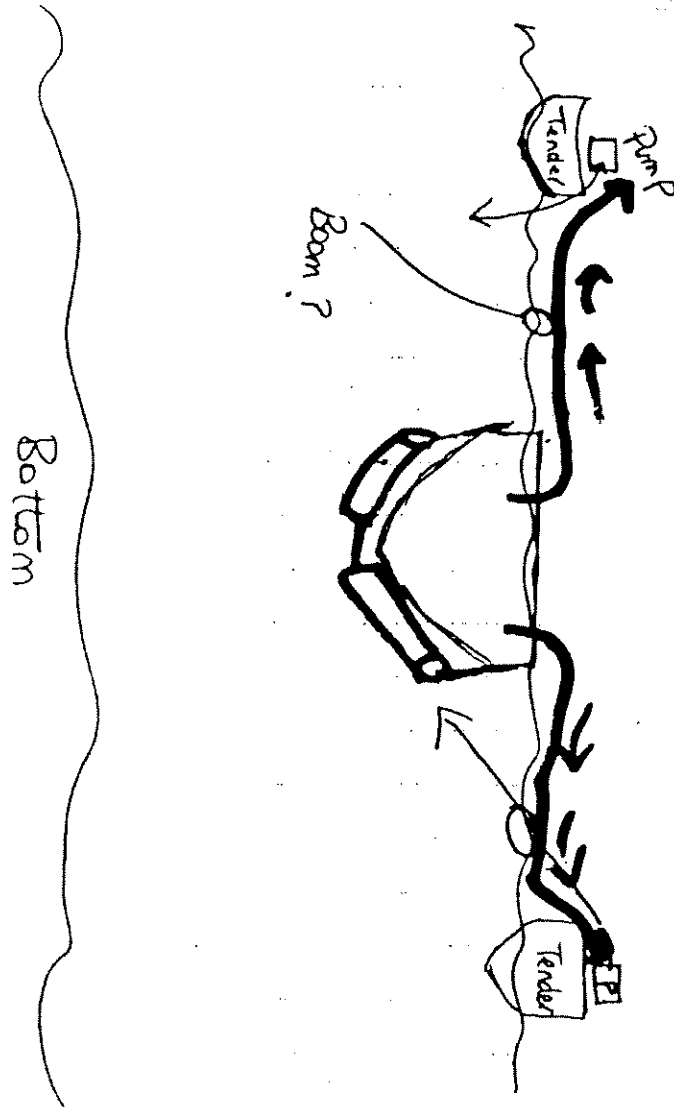
To indicate that all teams shall perform the same action at the same time leader shall outstretch both arms toward the teams followed by the command hand signal listed above.

MULTIPLE CONTINUOUS BLASTS with underwater signaling device shall indicate ABORT and move away from vessel To avoid confusion, underwater signaling device shall not be used for any other reason.

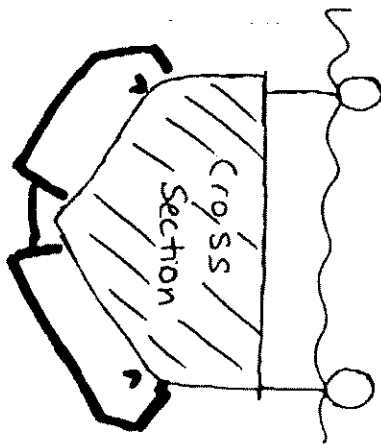
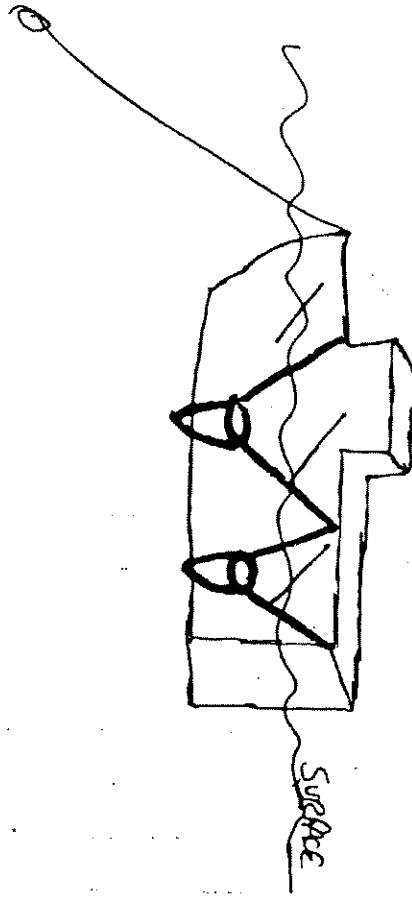
Communications between all boats will be Channel 14. Maka Koa will monitor Channel 16

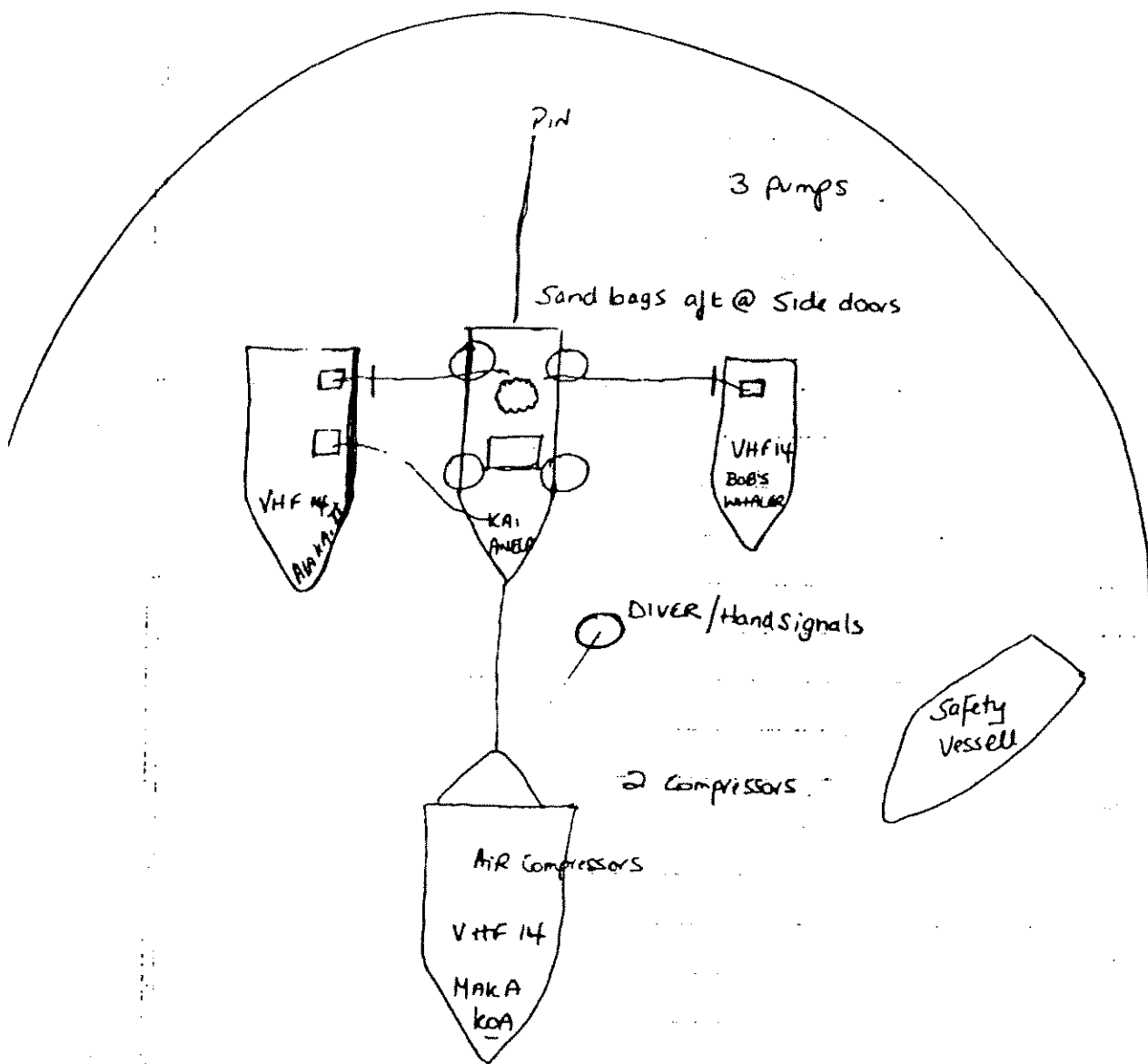
Communications to divers will originate from Maka Koa

Pump Out Stage



Step #3 (Pumpout)

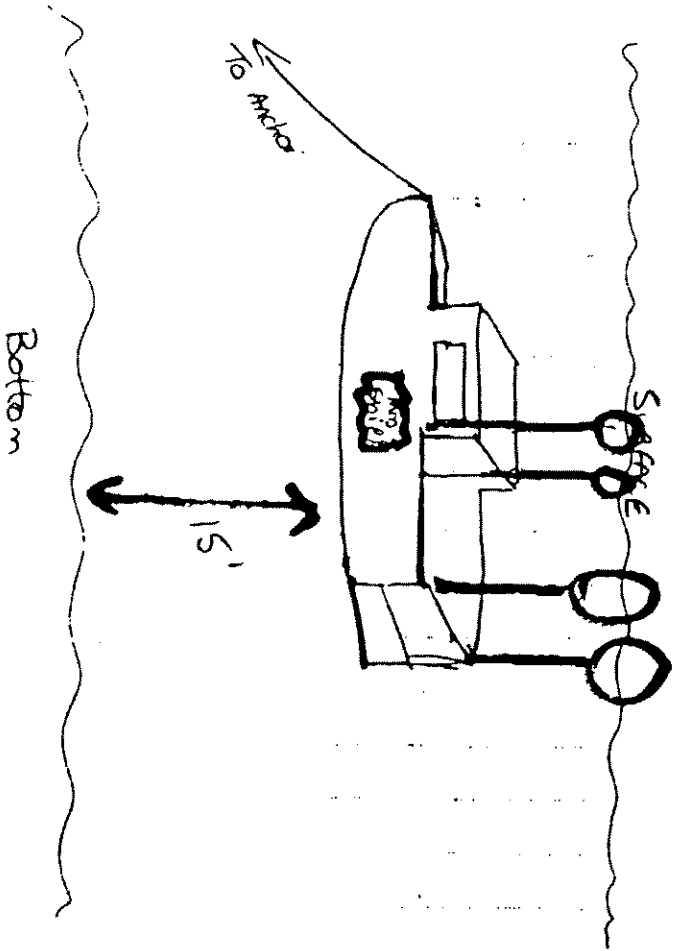




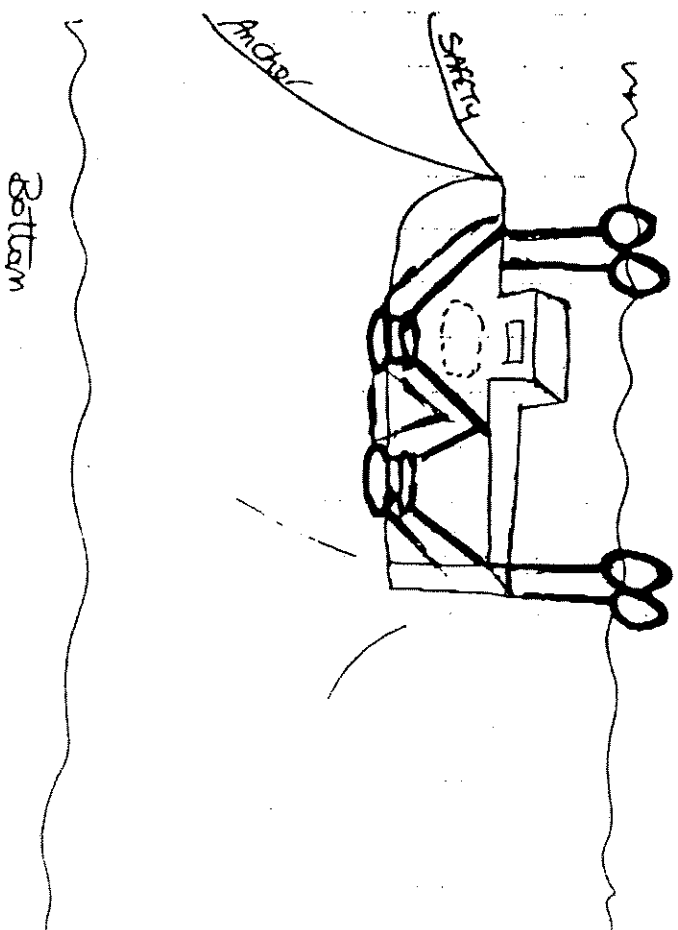
1 + 1 - Safety Dive
 8 Divers
 6 Pumpers crew
 1 + 8 - Crew
 2 - Compressor
 guys

27

Step #1 (Stabilize)



Step #2 (Extra Lift)



- 1. Vessel 15,000 lbs
- 2. Lift Bags - $4 \times 2000 = 8000 \text{ lbs}$

Salvage Plan #2

Environmental Concerns

- All boats used in the salvage will be secured to a mooring line and not use an anchor.
- There will be no chains or soft line drag across the bottom
- The vessel will be lifted directly to the surface without any dragging
- 2000' of oil absorbent boom will be carried on the Ala Kai II to be deployed to the skiff. It will be ready for immediate deployment should it be determined it is necessary.
- One bale of oil absorbent diapers will be on standby on the skiff for any minor fuel contaminates leaks.
- The anchor will be removed from the vessel Kai Anela by using a lift bag for the anchor and the anchor chain. The remaining anchor line will be secured to a mooring point.
- After the removal of the vessel Kai Anela all debris will be removed and any environmental concerns will be addressed

Stage #1 (Stabilize)

- Make off lines (bow, bridle stem) on Kai Anela to mooring pins
- Place four sand bags – two aft with plywood, one starboard, one port at side gate
- Pre-install and attach one pump out hose in engine room compartment
- Use weight and line to secure pump hose
- Place two air hoses from compressor to work site
- Attach four 2000 pound lift bags to cleats (as per diagram Step #1)
- Start filling all bags
- Slowly lift vessel to 15' above the bottom
- Fill in a systematic method so that the vessel rises equally
- Lift divers will watch and maintain scope of stern lines

Stage #2 (Extra Lift)

- Install securing straps for pontoon floats
- Start with aft pontoon floats (aft port, aft starboard) installation
- Install port side first and then starboard

- Install forward pontoon floats (forward port, forward starboard)
- Install port side first and then starboard
- Slowly inflate pontoons in a systematic order
- Inflate pontoon floats until gunnels are above water line

Stage #3 (Pump Out)

- Attach pre-installed hose to pump out pump
- Prime and start pumps
- Pump until vessel is stable on top of the water
- Board vessel with wet suit and buoyancy vest to finalize pumping

Stage #4 (Towing)

- Attach safety line from Kai Anela bow to stern bridle of Maka Koa
- Release all anchor and stern line from pins to Kai Anela
- Once vessel is floating on its own, remove all lift bags
- Tow Kai Anela with Maka Koa to Kihei Boat Ramp
- Ala Kai II to follow entire way to Kihei Boat Ramp for assistance
- 17' Whaler to follow to Kihei Boat Ramp
- Ala Kai II escorts Kai Anela into Kihei Boat Ramp
- Load on Kai Anela trailer and transport to Maui Dive Shop workshop
- Fuel removal will be done in place on shore by Penco (phone 545-5195) into approved 55 gallon steel fuel oil containers
- Approved disposal by Penco

Stage #4B (Contingency Plan)

- If Kai Anela is unable to be lifted sufficiently to pump out all water to stabilize the vessel
- Secure air bags in place
- Add additional buoyancy if needed

- Move vessel from Molokini Crater to a sandy bottom area outside of Kihei Small Boat Ramp [20-42.9 N 156-26.8 W] for fuel removal at the surface. If unable to remove the vessel fuel in a timely manner resink vessel until Penco (phone 545-5195) is ready to deploy.
- Follow charted course to Maalaea Harbor
- Secure vessel at pier
- Remove with crane

Stage #5

- If current salvor is unable to recover the vessel in a safe or timely manner, Penco is to be immediately called and the job turned over for completion. (545-5195)
- Will call Penco for deployment of a sea going barge, vessel "Big Dig", currently in Honolulu with a sufficient sized crane to the site for removal of vessel on approximately Friday October 13 2006. The sea going barge, which is reasonably ready to depart, will require a four point anchoring system and risk further contamination to the Molokini Crater ecosystem through the use of oil, hydraulic fluid, and the aforementioned four point anchoring system.

Underwater Communication Plan

All eyes of lift teams shall be trained on lift team coordinator at all times during lifting.

Hand Signals to Be Used Between Lift Coordinator and Lift Teams

Communication to each team will begin by pointing to a specific team and then using the following hand signals:

THUMBS UP = Slow Addition of Air to Lift bag

THUMBS DOWN = Activate Dump Valve to remove Air from Bag

FLAT OPEN HAND = Stop at Current Buoyancy Level

To indicate that all teams shall perform the same action at the same time leader shall outstretch both arms toward the teams followed by the command hand signal listed above.

MULTIPLE CONTINUOUS BLASTS WITH UNDERWATER SIGNALING DEVICE SHALL INDICATE ABORT AND MOVE AWAY FROM VESSEL. TO AVOID CONFUSION, UNDERWATER SIGNALING DEVICE SHALL NOT BE USED FOR ANY OTHER REASON.

Communications between all boats will be Channel 14. Maka Koa will monitor Channel 16

Communications to divers will originate from Maka Koa

Pump and Compressor Equipment

- Two 5.6 CFM air compressors

- One 7.2 CFM air compressor
- Two 3" trash pump
- One 1" trash pump
- Damage control equipment
 - Plywood
 - Ten pounds duct seal putty
 - Eight sandbags
 - Six DC plugs
 - Tool set
 - Power tools
 - Selection of various self tapping sheet metal screws

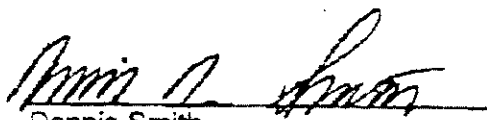
Final Jurisdiction


Lt. Jensen has final say on aborting all operations

If weather exceeds 2' wind chop the project will be cancelled.

Federal on Scene Coordinator

State on Scene Coordinator


Dennis Smith


Maui Dive Shop

DLNR Fees Costs Associated with Kai Anela Investigation

Division	Summary of Costs	Amount
DAR	Labor Expenses*	
	1 staff - 32 hrs. @ \$31.49/hr. (RS)	\$1,007.68
	1 staff - 16 hrs. @ \$25.75/hr. (JM)	\$412.00
	1 staff - 32 hrs. @ \$33.99/hr. (SH)	\$1,087.68
	1 staff - 78 hrs. @ \$34.12/hr. (DG)	\$2,661.36
	1 staff - 16 hours @ \$17.30/hr. (C)	\$276.80
	Vessel Expenses	
	2 days @ \$500/day (Seacat)	\$1,000.00
	2 days @ \$400/day (Whaler)	\$800.00
	Travel Expenses	
DOCARE	October trip	
	1 round trip ticket (O'ahu-Maui) @ \$120	\$120.00
	1 staff x 2.5 days per diem @ \$80/day	\$200.00
	February trip	
	2 round trip tickets (O'ahu-Maui) @ \$179.60/ticket	\$359.20
	2 staff x 2 nights hotel @ \$124.79/night	\$499.16
	Rental car - 3 days @ \$37.25/day	\$111.75
	2 staff x 2.5 days per diem @ \$80/day	\$400.00
	Misc. Expenses	
	Expendable data collection supplies	\$150.00
TOTAL	Labor Expenses*	
	1 staff - 40 hours @ \$38.32/hr. (KB)	\$1,532.80
TOTAL		\$10,618.43

* Labor costs include salary plus fringe benefits (36.46%)

The last column of Table 8.8 shows the composition of the main economic benefits of the coral reefs in Hawaii. The average annual value of the coral reef ecosystem amounts to \$364 million. This leads to a net present value at a discount rate of 3% of nearly \$10 billion. Without discounting this value would be nearly \$19 billion, while at a discount rate of 15% the net present value amounts to \$2.8 billion. These high numbers certainly indicate that it is worthwhile, both from an ecological and an economic perspective, to take care of this valuable resource.

With an average annual benefit of \$304 million, the recreational value dominates the overall value. This implies that almost 85% of the value of the Hawaiian reefs is dependent on tourism, and visa versa, that tourism is very dependent on the state of the coral reef of Hawaii. Second is the amenity value with a value of \$40 million per annum. Although the impact on the property value is minimal, the magnitude of the overall value of properties in Hawaii is substantial, thereby still generating a high coral reef related value. The third most important benefit is the biodiversity value. The scientific value is a rather solid estimate and therefore does not require more effort. The non-use value of the Hawaiian reefs, on the other hand, are estimated on the basis of a rather simple approach and are therefore candidate for improvements. New results in the field of the non-use values are expected from a study by Leeworthy and Wiley within the near future. Typically, the fishery value is the least important reef related benefit.

Table 8.8 also provides a comparison between the different case studies. This comparison confirms the danger of generalizing economic benefits estimates for Hawaiian reefs in general. The value estimates vary widely in terms of both the overall level and the configuration of the benefits. For example, were recreational benefits are the most important value at Hanauma Bay, it is the amenity benefits that dominates the overall value at the Kihei coast.

Table 8.8 Annual benefits and the net present value of the Hawaiian coral reefs and the different study sites

		Hanauma Bay, Oahu	Kihei Coast, Maui	Kona Coast, Hawaii	Hawaii - overall
Recreational value	<i>Million\$/year</i>	36.23	8.02	8.06	304.16
Amenity value	<i>Million\$/year</i>	0.00	18.26	4.47	40.05
Biodiversity value	<i>Million\$/year</i>	1.11	1.71	4.35	17.00
Fishery value	<i>Million\$/year</i>	0.01	0.10	0.70	2.50
Education spill-over value	<i>Million\$/year</i>	0.22	-	-	-
Total annual benefits	<i>Million\$/year</i>	37.57	28.09	17.68	363.71
Net Present Value @ 3%	<i>Million\$</i>	1,053	522	389	9,722

By reporting the total values on a per area basis, Table 8.9 enables the comparison of the three case studies in absolute levels. Not surprisingly, Hanauma Bay is the most valuable site of coral reefs in Hawaii, and perhaps even in the world. This is all due to the high recreational use of the Bay. In fact, the reefs at Hanauma Bay that can be categorized as ecologically average coral reefs for Hawaiian standards are more than 125 times more valuable than the reefs at the Kona Coast that are often considered to more ecologically diverse. This demonstrates that economic values and economic values do not always go hand in hand.

Table 8.9 Annual benefits and net present values of the different case study sites per area of coral reef

		Hanauma Bay, Oahu	Kihei Coast, Maui	Kona Coast, Hawaii
Total annual benefits	$\$/m^2$	91.63	3.51	0.73
Net Present Value	$\$/m^2$	2,568	65	19
Total annual benefits	$\$/acre$	370,819	14,210	2,944
Net Present Value	$\$/acre$	10,393,033	264,231	78,698

The following represents rationales for the use of a coral colony as the definition of a specimen relative to damage and injury events.

It should be noted that for many of the coral scientific collecting or special activity permits that I have written for DAR, I have used a "nubbin" (or branch tip) – a small piece of broken live coral usually less than 3cm x 3cm x 3cm, as the representative of a coral specimen for permitting reasons.

Individual coral animals are called polyps; there can be hundreds to thousands of individual polyps living, and attached, together to form a coral colony. Most reef biologists consider a coral colony to be the independent unit for clonal species such as hermatypic (i.e. reef-building) corals. Often when someone uses the term "coral" they are referring to a coral colony. An independent colony would be made-up of genetically-identical coral polyps attached together by a thin, interconnective layer of tissue and living within a communal skeletal matrix that in most cases is attached to the substrate. From an ecological point of view, the coral colony (not the polyp) functions as the smallest independent unit that provides shelter and other ecosystem services to a wide array of reef fish and invertebrates. From a temporal point of view, it is the coral colony that can live to be tens to hundreds of years old. In many ways the coral colony is analogous to a tree and the polyps to the leaves of the tree, the most conservative estimate of damage to a tree is the tree itself, not the individual leaves or bark. Note that damage to the bark or leaves would be construed as damage to the tree, and in a similar vein, damage to the coral colony resulting in fragments, scrapes, breakage or loss of polyps (including bleaching events) would similarly constitute damage to the coral colony. It is the coral colonies in assemblages over time that form coral reefs

Numerous marine biology textbooks define the coral colony as ecologically-functional unit of a coral, often using the term colony to define functional states and impacts. Examples include Gulko, 1998; Klemm et al, 1995; Nybakken 1993; Reseck, 1988; Barnes 1987.

Submitted by Dave Gulko, DAR, October 3, 2007



STATE OF HAWAII
OFFICE OF HAWAIIAN AFFAIRS
711 KAPI'OLANI BOULEVARD, SUITE 500
HONOLULU, HAWAII 96813

HRD07/3272

October 24, 2007

Blaine Rogers, Division of Aquatic Resources
Department of Land and Natural Resources
1151 Punchbowl Street, Room 350
Honolulu, Hawai'i 96813

RE: Enforcement Action against Maui Snorkel Charters, Inc. for Damaging Coral within Molokini Shoal Marine Life Conservation District, Maui County, Hawai'i.

Dear Mr. Rogers,

The Office of Hawaiian Affairs (OHA) is in receipt of your request for written comments regarding the Enforcement Action against Maui Snorkel Charters, Inc. for damaging coral within the Molokini Marine Life Conservation District (MLCD) that occurred on September 29 to October 6, 2007 from the sinking and subsequent attempts to raise the vessel, *Kai Anela*. OHA is the "principal public agency in this State responsible for the performance, development, and coordination of programs and activities relating to native Hawaiians and Hawaiians."¹ It is our duty to "[a]ssess[] the policies and practices of other agencies impacting on native Hawaiians and Hawaiians, and conduct[] advocacy efforts for native Hawaiians and Hawaiians."² In this capacity, we offer our understanding of this incident before offering comments regarding the enforcement action.

OHA first notes that Molokini is an area of great significance for Native Hawaiians. When Pele's dream lover, Lohi'au lived at Mā'alaea, Maui, he took as his wife a mo'o named Pu'uoinaina. Pele, in her anger fought with and eventually bisected Lohi'au's wife. The mo'o Pu'uoinaina's tail became Pu'uōla'i Hill in Mākena, Maui, and her head came to rest creating Molokini Islet.

¹ Hawai'i Revised Statutes (HRS) § 10-3(3).

² HRS § 10-3(4).

The coral growing inside of Molokini also holds great meaning for us. In the Hawaiian cosmology as told in the Kumulipo, the first creations were coral and coral heads:

Ka Wā 'Akahi

'O ke au i kahuli wela ka honua

'O ke au i kahuli lole ka lani

'O ke au i kuka'iaka ka lā

E ho'omālamalama i ka malama

'O ke au o Makali'i ka pō

'O ka walewale ho'okumu honua ia

'O ke kumu o ka lipo i lipo ai

'O ke kumu o ka pō i pō ai

'O ka lipolipo, 'o ka lipolipo

'O ka lipo o ka lā, 'o ka lipo o ka pō

Pō wale ho'i

Hānau ka pō

Hānau Kumulipo i ka pō, he kāne

Hānau Pō'ele i ka pō, he wahine

Hānau ka Uku ko'ako'a, hānau kāna, he
'āko'ako'a, puka

The First Age

Time was altered when the earth became
hot

Time was altered when the sky turned
inside out

A time when the days were dark

Brightened only by the moon

A time of Makali'i

The earth originated in slime

With its origins in darkness

With its origins in night

Darkness, darkness

Darkness of day, darkness of night

Engulfed in night

The night gives birth

Kumulipo gives birth at night to a male

Pō'ele gives birth in the night to a female

The Coral gives birth to an offspring, the
coral head emerges

The Kumulipo, as a sacred account, rings with rich tones and layered meanings. In the reading of the Kumulipo we can see reflected in ourselves the development of a human being, from infancy to puberty to adulthood and even the creation of one's own family. In short, coral is not only the seminal starting point for all other forms of being; it is also our ancestor and a part of us. There exists a relationship in which we are not to harm and respect the coral as they are related and divine. As such, we require that it not be harmed. OHA applauds the action of Division of Aquatic Resources in this effort and urges the Board of Land and Natural Resources to take action in this matter.

Further, Molokini is a MLC. By their very nature, MLCs exist to conserve and replenish marine resources. They provide coral with a protected area in which to grow and reproduce. Since the purpose of MLCs is to protect marine life to the greatest

extent possible, OHA was not expecting to learn that Molokini, "receives almost non-stop use during the day, with commercial vessels up to 90 feet long making both early and late morning journeys to the crater."³ Additionally, OHA was surprised to learn that there are currently 41 commercial use permits for the Molokini MLCD, resulting in over 1000 visitors per day.⁴ There are a total of 26 submerged moorings available (including public use) managed by the Department of Land and Natural Resources (DLNR) at Molokini.

OHA notes that the Hawai'i Constitution Article XI, § 1 establishes a constitutional public trust doctrine in Hawai'i and assigns the State (and its agencies) as the trustee of Hawai'i's resources. The heavy commercial use of the limited and State-managed resources at Molokini is inconsistent with this area as a MLCD and a public trust resource. OHA is reliant upon DLNR and the Division of Aquatic Resources (DAR) to properly manage this area and its important natural resources.

In the case of Maui Snorkel Charters, Inc., OHA understands that the initial (and ultimately preventable) sinking of the *Kai Anela* combined with the subsequent dragging, re-settling and then unsuccessful raising of the ship over an eight-day period resulted in over 192 square meters of coral damage.⁵ OHA is saddened that a full recovery for this area is estimated "to take at least 80 years."⁶

OHA stresses that if the damage were the result of a force of nature, for example, we would recommend a different course. This not being the case, however, OHA urges that this enforcement action not be taken lightly. The consequences of this sinking to us, as Native Hawaiians, and to the public as well are heavy. Therefore, a parallel result should reach to the creator of this unfortunate event. Again, OHA relies upon DLNR and DAR to act in their capacities as both managers and stewards of our valued and shared resources.

Finally, the lands which were impacted are ceded lands, as are all submerged lands. As such, we request that they be treated with the respect due to them, as they are part of the 1.8 million acres of land that belong to the Hawaiian monarchy and were transferred to the state when Hawai'i became a U.S. state. Further, OHA is entitled to 20% of all revenue generated on this land. An appraisal will determine the consideration to be paid, and OHA requests that a fair market price be placed on all future revenues generated by permits granted for Molokini.

³ Invitation to comment, Item F, page 2.

⁴ Ibid.

⁵ Ibid.


⁶ Ibid. at page 8.

Blain Rogers
Division of Aquatic resources
October 24, 2007
Page 4

Thank you for the opportunity to comment. If you have any further questions or concerns please contact Grant Arnold at (808) 594-0263 or granta@oha.org.

Blain Rogers
Division of Aquatic resources
October 16, 2007
Page 4

Sincerely,



Clyde W. Nāmu'o
Administrator

C: Thelma Shimaoka, Community Resource Coordinator
Office of Hawaiian Affairs, Maui Office
140 Ho'ohana St., Ste. 206
Kahului, Hawai'i 96732

Thomas R. Cole

Attorney at Law

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E-Mail: tcolelaw@maui.net

March 7, 2008

VIA FACSIMILE TRANSMISSION: (808) 587-2999

AND U.S. MAIL

William Wynhoff
Department of the Attorney General
465 S. King St., Rm. 300
Honolulu, HI 96813

2008 MAR - 7 P 4:12
LAND/TRANS. DIV.
DEPARTMENT OF
ATTORNEY GENERAL

Re: Enforcement action against Maui Snorkel Charters, Inc. for damaging coral within the Molokini Shoal Marine Life Conservation District

Dear Mr. Wynhoff:

As you know this office is general counsel for Maui Snorkel Charters, Inc. This is a follow-up to our telephone conversation that we had regarding potential methods by which we could enter into an agreement whereby my client would be able to pay some portion of the proposed fine which the Land Board imposed at the last Board meeting regarding this matter.

As you are aware, based upon the expert reports I have reviewed, (copies which have received) the damage as alleged by the Division of Aquatic Resources is not supported by our experts' on-sight inspection and their subsequent opinions. However, my client, being actively involved with preservation of the marine resources, has expressed an interest in resolving this matter – especially in light of the impression they have received that funds generated from this unfortunate sinking of the Kai Anela would be used to support the activities of Division of Aquatic Resources and hopefully add to the preservation of the Molokini Shoal Area, as well as other marine resources.

The question that we discussed over the phone dealt with practical business aspects of generating sufficient funds to pay an assessment in the magnitude proposed by the Board. Based upon the Board's decision and the ability of the Company to generate net income to make the payment requested by the Board is it clear that this company cannot generate sufficient net income to pay the assessment in the timeframe desired by the Board. This leaves two viable options. Either we come up with some sort of agreed upon payment that is satisfactory to the Board and which we can recently guarantee will be paid or the company would be put into the situation where it would have to obtain a second review of this matter so that it could convince a hearing examiner, based upon the evidence, which we think is clear, that the amount of damage to the reef is far less than suggested

Street Address - 233A S. Market Street, Wailuku, Maui, Hawaii 96793

EXHIBIT L

by the Aquatics Division and therefore result in a recommendation of compensation to the Department in a far smaller number than they have requested.

The purpose of this letter is to propose a settlement pursuant to Rule 408 of the Hawai'i Rules of Evidence. The contents of this letter may not be used in any hearing or proceeding relating to this claim.

After much consideration and "number crunching" on behalf of Maui Snorkel Charters Inc., we are making the following offer:

1. That the fine of \$550,000 which has been imposed shall require a payment of \$250,000 within 90 days of entering into the settlement with the balance of \$300,000 being suspended if the \$250,000 is paid within the timeframe set forth above. If the \$250,000 is not paid within the timeframe set forth above, then the entire \$550,000 fine will be reinstated
2. The permit held by Maui Snorkel Charters Inc. will be suspended for 3 months and Maui Snorkel Charters Inc. will get credit for the 2.5 months that the vessel was not in operation after the event. The remaining portion of the suspension would be imposed to begin on May 15, 2008 through May 30, 2008.
3. The above payment, if made in timely fashion, would satisfy Maui Snorkel Charters Inc.'s obligations to the Board and the Division of Aquatic Resources regarding all monetary amounts and suspensions.
4. The Settlement Agreement needs to clearly reflect that the events and consequences to the reef that surrounded the sinking of the vessel were not a result of any negligence on the part of Maui Snorkel Charters Inc or improper training but the fines and assessments are being made only because of the damage to the reef that occurred as a result of the accidental sinking of the Kai Anela at Molokini in September of 2006.

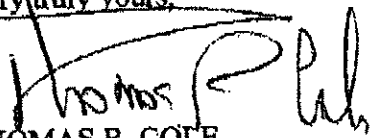
This offer is made with the intent of trying to address the concerns of the Board and to assure that a substantial monetary contribution for the damage to the reef is made without having to be faced with the possibility of having to liquidate the company without the corresponding return to the State to support the marine resources.

I appreciate your time and cooperation in this matter and trust that you will give the above due consideration. It has taken several weeks since we last spoke for my clients to be able to obtain some reasonable assurances that if we enter into such a settlement as set forth above, that my clients will be able to meet the requirements of the settlement. We believe that is something that can be done and thus we are making the offer.

If you have any questions regarding the above, please do not hesitate to give me a call.

Letter to William Wynhoff
Dated March 6, 2008
Page 3

~~Very truly yours,~~



THOMAS R. COLE
Attorney at Law

TRC: re
cc: Maui Snorkel Charters